

Copyright

by

Lori Anne Roalson

2007

The Dissertation Committee for Lori Anne Roalson certifies that this is the approved
version of the following dissertation:

The Unique and Moderating Effects of Religious, Family and School Connectedness on
Early Adolescent Adjustment

Committee:

Alexandra Loukas, Supervisor

Nell Gottlieb

Mary Steinhardt

Fred Peterson

Chris Ellison

The Unique and Moderating Effects of Religious, Family and School Connectedness
on Early Adolescent Adjustment

by

Lori Anne Roalson, B.S.; M.Ed.

Dissertation

Presented to the Faculty of the Graduate School of

The University of Texas at Austin

in Partial Fulfillment

of the Requirements

for the Degree of

Doctor of Philosophy

The University of Texas at Austin

August 2007

The Unique and Moderating Effects of Religious, Family and School
Connectedness on Early Adolescent Adjustment

Publication No. _____

Lori Anne Roalson, Ph.D.

The University of Texas at Austin, 2007

Supervisor: Alexandra Loukas

Parent-adolescent connection is considered a core parenting component influencing adolescent psychosocial development. When the connection is poor, the adolescent has an increased risk of developing depressive symptoms and behavioral problems. Non-family socialization experiences increase in importance as the quality of family experiences decreases and may protect adolescents with low family connectedness from demonstrating depressive symptoms and behavioral problems.

The school is one context that may provide socialization experiences to promote continued development for early adolescents. Stronger levels of connection to the school have been related to decreased prevalence of adolescent problem behaviors such as delinquency.

The religious community represents another context in which early adolescents may develop important connections. This context is particularly important to study as

over half of all adolescents in the U.S. report attending church services weekly and/or are involved in a church youth group and approximately 60% of adolescents report their faith is important to them. Research examining adolescent feelings of connection to their religious group and how this relates to delinquent behaviors and depressive symptoms, however, is lacking.

The present study explored the cross-sectional contribution of adolescent connections to the family, school and religious contexts to the depressive symptoms and delinquent behaviors of a sample of 167 middle school students. Three aspects of religious connectedness (i.e., youth leader, congregation member, and spiritual connectedness) were found to uniquely contribute to the occurrence of early adolescent outcomes. Specifically, youth leader and spiritual connectedness uniquely contributed to early adolescent engagement in more serious delinquent behaviors. Congregation member and spiritual connectedness contributed to the occurrence of early adolescent depressive symptoms. Additionally, all three types of religious connectedness buffered the relationship between family connectedness and more serious delinquent behaviors. That is, high levels of religious connectedness protected early adolescents from engaging in the problem behaviors. Unexpectedly, an exacerbating relationship was demonstrated between school connectedness and youth leader connectedness as well as spiritual connectedness on early adolescent less serious delinquent behaviors. Findings are discussed from the perspectives of Social Control Theory and Attachment Theory.

Table of Contents

List of Tables	x
List of Figures	xi
CHAPTER 1: INTRODUCTION	1
Purpose	4
Hypotheses	5
Definition of Terms	9
Significance of Study	12
CHAPTER 2: REVIEW OF LITERATURE	13
The Developing Adolescent	13
Adolescent Problematic Developmental Outcomes	13
Theoretical Foundations of Adolescent Connectedness	16
Attachment Theory	16
Attachment and Adolescents	17
Social Control Theory	19
The Family Context	20
Parent-Adolescent Connection and Adolescent	
Internalizing Outcomes	22
Parent-Adolescent Connection and Adolescent	
Externalizing Outcomes	23
When the Family is Not Enough	24

The School Context	25
School as a Developmental Context	25
School Connectedness and Adolescent Internalizing Outcomes	27
School Connectedness and Adolescent Externalizing Outcomes	28
Multiple Contexts	29
The Religious Context	32
Adolescent Religiosity	32
The Religious Context and Adolescent Development	34
Parental Religiosity	38
Religion and Adolescent Internalizing Problems	38
Religion and Adolescent Externalizing Problems	40
Statement of Purpose	42
Hypotheses	43
CHAPTER 3: METHODS	48
Research Design	48
Participants	48
Procedure	49
Instrumentation.....	52
Family Connectedness	52
School Connectedness	53
Religious Connectedness	53
Delinquent Behavior	55

Depressive Symptoms	56
CHAPTER 4: RESULTS	57
Preliminary Analyses	57
Correlational Analyses	58
Testing Hypotheses	59
Hypothesis 1	59
Hypothesis 2	60
Hypothesis 3	62
Hypothesis 4	65
Hypothesis 5	67
CHAPTER 5: DISCUSSION	70
Religious Connectedness and More Serious Delinquent Behaviors	71
Religious Connectedness and Less Serious Delinquent Behaviors	73
Religious Connectedness and Depressive Symptoms	77
Limitations of the Current Study	78
Implications for Health Education	80
Conclusions and Future Directions of the Present Study	81
Appendix A: Parental Consent Form	98
Appendix B: Early Adolescent Assent Form	101
Appendix C: School Commitment Letter	102
Appendix D: Cover Letter to Middle School Parents	103
Appendix E: Survey Items	104

Appendix F: “Healthy Connections” Survey Booklet	108
References	119
Vita	131

List of Tables

Table 4.1:	Descriptive Summary of Predictor and Outcome Variable Means, Standard Deviations, and Independent Samples Test for Gender Differences	83
Table 4.2:	Zero-Order Correlations Among Covariates, Predictor, and Outcome Variables	84
Table 4.3:	Direct Effects of Family, School, and Religious Connectedness on Early Adolescent Delinquent Behaviors and Depressive Symptoms	85
Table 4.4:	Hierarchical Regression Analyses of Family, School, and Religious Connectedness on Early Adolescent Outcomes	86
Table 4.5:	Effects of Family, School, and Religious Connectedness on Early Adolescent More Serious Delinquent Behaviors	87
Table 4.6:	Effects of Family, School, and Religious Connectedness on Early Adolescent Less Serious Delinquent Behaviors	88
Table 4.7:	Effects of Family, School, and Religious Connectedness on Early Adolescent Depressive Symptoms	89

List of Figures

Figure 1.1:	Conceptual Model Depicting Family, School, and Religious Contextual Influence on Early Adolescent Outcomes	5
Figure 4.1:	Examining the Family Connectedness X Youth Leader Connectedness Interaction in Relation to Early Adolescent More Serious Delinquent Behaviors	90
Figure 4.2:	Examining the Family Connectedness X Congregation Member Connectedness Interaction in Relation to Early Adolescent More Serious Delinquent Behaviors	91
Figure 4.3:	Examining the Family Connectedness X Spiritual Connectedness Interaction in Relation to Early Adolescent More Serious Delinquent Behaviors	92
Figure 4.4:	Examining the School Connectedness X Spiritual Connectedness Interaction in Relation to Early Adolescent Less Serious Delinquent Behaviors	93
Figure 4.5:	Examining the Congregation Member Connectedness X Gender Interaction in Relation to Early Adolescent Less Serious Delinquent Behaviors	94
Figure 4.6:	Examining the Family Connectedness X Gender Interaction in Relation to Early Adolescent Depressive Symptoms	95
Figure 4.7:	Examining the School Connectedness X Gender Interaction in Relation to Early Adolescent Depressive Symptoms	96

Figure 4.8:	Examining the School Connectedness X Youth Leader	
	Connectedness X Gender Interaction in Relation to Early	
	Adolescent Less Serious Delinquent Behaviors	97

CHAPTER 1: INTRODUCTION

Adolescence is a developmental period marked by numerous changes for the individual, including biological changes, transition to a larger school (either middle or high school), autonomy seeking, and increased responsibilities (Lerner & Galambos, 1998; Eccles et al., 1993; Allen, Hauser, Bell, & O'Connor, 1994). These changes require the adolescent to adjust psychosocially and require his environment to flex to meet his changing needs. Not surprisingly, adolescent experience of internalizing (e.g., depressive symptoms) and externalizing problems (e.g., delinquent behaviors) rises during this time (Saluja et al., 2004; Loeber, Keenan, & Zhang, 1997). By consistently meeting the changing adolescent developmental needs, the contexts in which the adolescent interacts may help the adolescent adjust and help decrease the risk of developing these problems.

The family context is the primary influence on adolescent development wherein parent-adolescent connection is considered a core parenting component influencing adolescent psychosocial development (Barber, 1997). A strong connection is formed when there is shared warmth and love between the parent and adolescent (Baumrind, 1991), creating a relationship that is nurturing and supportive toward the adolescent (Maccoby, 1992) and fostering a sense of acceptance by parents (Gray & Steinberg, 1999). As Attachment Theory explains, the parent-adolescent relationship teaches the adolescent how to negotiate fulfillment of his needs and his value within present and future relationships (Ainsworth, 1989). For the adolescent, it is the experience and understanding of parental emotional availability that is key for a positive and strong connection. When the connection is poor, the adolescent is more likely to develop

adverse outcomes such as depressive symptoms (Sund & Wichstrom, 2002; Laible, Carlo, & Rafaelli, 2000) and externalizing problems (Sameroff, Peck, & Eccles, 2004; Gray & Steinberg, 1999). Interestingly, research shows that poor quality connections are particularly detrimental for girls, likely due to socialization toward interpersonal concerns. When valued relationships are poor, girls appear to be more vulnerable to adverse developmental outcomes as compared to boys (Leadbeater, Kuperminc, Blatt, & Hertzog, 1999).

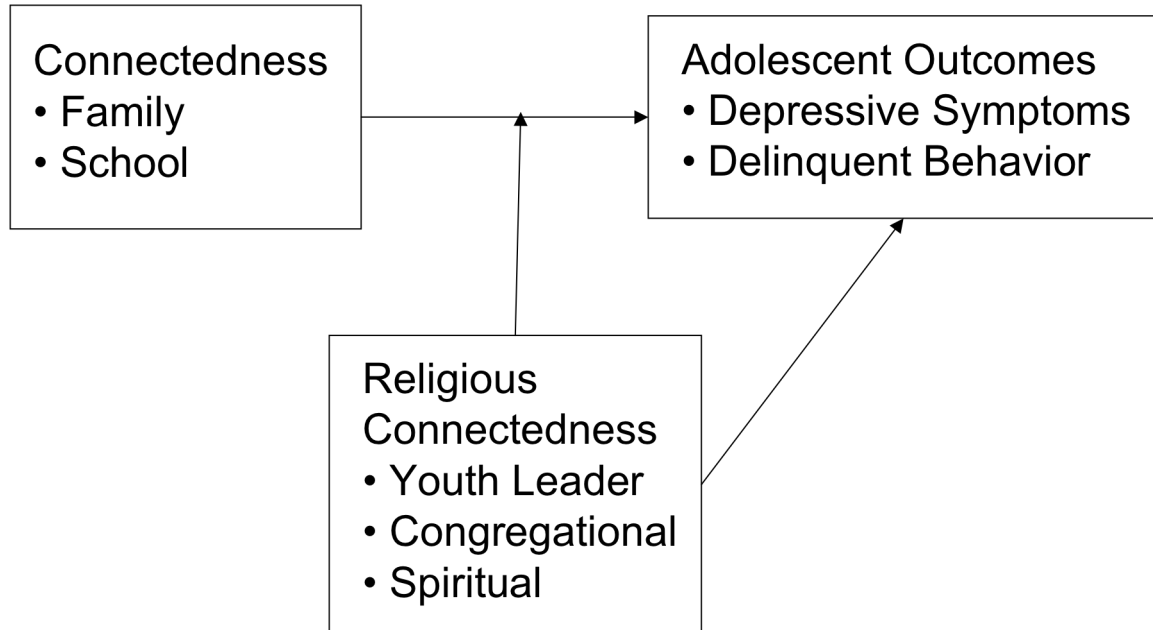
When adolescents are not strongly connected within the family, other contexts may provide opportunities to develop meaningful, influential connections. Research suggests it is the act of meeting the adolescent's need for connection, regardless of the contextual source providing it, that promotes continued development. These socialization experiences from non-family contexts (e.g., school or religious groups) are particularly important for adolescents who are lacking in these experiences within the family (Barber & Olsen, 1997). The school is one such environment for the adolescent. Social Control Theory (Hirschi, 1969) states that higher levels of attachment to a conventional group such as the school will strengthen the adolescent's emotional bond, or connection, with that group and decrease the likelihood he will experience internalizing and externalizing problems. Empirical research supports this relationship with the school context such that stronger levels of connectedness with the school have been negatively related to both depressive symptoms (Barber & Olsen, 1997; Resnick, et al., 1997) and adolescent externalizing problems such as delinquency (Dornbusch, Laird, & Wong, 2001; Crosnoe, Erickson, & Dornbusch, 2002).

The religious community is another context within which adolescents interact and may develop important connections. This context is important to study as over half of all adolescents surveyed nationally report attending church services weekly and/or are involved in a church youth group, with approximately 60% of all adolescents reporting their faith is important to them (Smith, Denton, Faris, & Regnerus, 2002). Hence, religion is prominent in their lives and valued by many adolescents. Although empirical research in this field is relatively young, the growing body of literature supports an inverse relationship between religion and early adolescent internalizing (Pearce, Little, & Perez, 2003; Mosher & Handal, 1997) and externalizing problems (Baier & Wright, 2001; Simons, Simons, & Conger, 2004). Only recently, within the past 10 years, have researchers begun to consider the many facets of religion and its mechanisms of influence on adolescent development. Support is emerging that demonstrates the negative relationship between congregational social support, or connectedness, and early adolescent depressive symptoms (Pearce, Little, & Perez, 2003). Additionally, limited research indicates that religiousness that includes spiritual experiences in daily activities (e.g., a spiritual connection) appears to have a protective effect for some early adolescents, wherein it buffers or decreases the effects of exposure to violence on adolescent externalizing problems (Pearce, Jones, Schwab-Stone, & Ruchkin, 2003). Further research is needed to better understand the role of religiousness in early adolescent outcomes and determine if this contextual influence contributes to adolescent outcomes over and above the influence of other contexts.

Purpose

The present study explored the contributions of connections to the family, school and religious contexts to the internalizing (e.g., depressive symptoms) and externalizing (e.g., delinquent behavior) problems of 10-14 year old early adolescents. It was intended to replicate the literature by (1) examining the direct effects of adolescent feelings of connectedness to each context on the outcomes, and (2) determining how these effects may be moderated by gender. This study also extended the literature in its examination of religious connectedness, to both the congregation (defined by youth leader and members of the congregation) and God, on the early adolescent outcomes. Specifically, this study considered whether religious connectedness moderated the relationship between (1) family connectedness and adolescent outcomes, and (2) school connectedness and adolescent outcomes. That is, this study determined if religious connectedness buffered or offset the contributions of low levels of family and school connectedness to early adolescent depressive symptoms and delinquent behaviors. See Figure 1.1 for conceptual model.

Figure 1.1. Conceptual model depicting family, school and religious contextual influence on early adolescent outcomes.



Hypotheses

Based on Attachment Theory and Social Control Theory, the following hypotheses were made.

H1: Quality of family connectedness, school connectedness, and religious connectedness would each be directly related to early adolescent outcomes.

- a. Higher levels of family connectedness would be associated with fewer delinquent behaviors and fewer depressive symptoms.
- b. Higher levels of school connectedness would be associated with fewer delinquent behaviors and fewer depressive symptoms.

- c. Higher levels of religious connectedness, as measured by adolescent connection to the youth leader, would be associated with fewer delinquent behaviors and fewer depressive symptoms.
- d. Higher levels of religious connectedness, as measured by adolescent connection to members of the congregation, would be associated with fewer delinquent behaviors and fewer depressive symptoms.
- e. Higher levels of religious connectedness, as measured by adolescent connection to God (i.e., spiritual connectedness), would be associated with fewer delinquent behaviors and fewer depressive symptoms.

H2: Religious connectedness would account for a unique proportion of the variance of early adolescent outcomes above and beyond the family and school contexts.

- a. Adolescent connectedness to the youth leader would account for a unique proportion of the variance of early adolescent delinquent behaviors and depressive symptoms above and beyond the family and school contexts.
- b. Adolescent connectedness to members of the congregation would account for a unique proportion of the variance of early adolescent delinquent behaviors and depressive symptoms above and beyond the family and school contexts.
- c. Spiritual connectedness would account for a unique proportion of the variance of early adolescent delinquent behaviors and depressive symptoms above and beyond the family and school contexts.

- H3: Religious connectedness would moderate, or buffer, the relationships between quality of family connectedness and school connectedness and early adolescent outcomes.
- a. Adolescent connectedness to the youth leader would buffer, or decrease, the effects of low levels of family connectedness on early adolescent delinquent behavior and depressive symptoms.
 - b. Adolescent connectedness to members of the congregation would buffer, or decrease, the effects of low levels of family connectedness on early adolescent delinquent behavior and depressive symptoms.
 - c. Spiritual connectedness would buffer, or decrease, the effects of low levels of family connectedness on early adolescent delinquent behavior and depressive symptoms.
 - d. Adolescent connectedness to the youth leader would buffer, or decrease, the effects of low levels of school connectedness on early adolescent delinquent behavior and depressive symptoms.
 - e. Adolescent connectedness to members of the congregation would buffer, or decrease, the effects of low levels of school connectedness on early adolescent delinquent behavior and depressive symptoms.
 - f. Spiritual connectedness would buffer, or decrease, the effects of low levels of school connectedness on early adolescent delinquent behavior and depressive symptoms.

H4: The effects of family connectedness, school connectedness, and religious

connectedness on early adolescent outcomes would vary by gender.

a. The relationships between family connectedness and depressive symptoms and delinquent behavior would be stronger for girls than for boys.

b. The relationships between school connectedness and depressive symptoms and delinquent behavior would be stronger for girls than for boys.

c. The relationships between adolescent connectedness to the youth leader and depressive symptoms and delinquent behavior would be stronger for girls than for boys.

d. The relationships between adolescent connectedness to members of the congregation and depressive symptoms and delinquent behavior would be stronger for girls than for boys.

e. The relationships between spiritual connectedness and depressive symptoms and delinquent behavior would be stronger for girls than for boys.

H5: The moderating effect of religious connectedness on adolescent outcomes would vary by gender.

a. Adolescent connectedness to the youth leader would be a stronger buffer of the relationships between family connectedness and early adolescent delinquent behaviors and depressive symptoms for girls than for boys.

b. Adolescent connectedness to members of the congregation would be a stronger buffer of the relationships between family connectedness and early adolescent delinquent behaviors and depressive symptoms for girls than for boys.

- c. Spiritual connectedness would be a stronger buffer of the relationships between family connectedness and early adolescent delinquent behaviors and depressive symptoms for girls than for boys.
- d. Adolescent connectedness to the youth leader would be a stronger buffer of the relationships between school connectedness and early adolescent delinquent behaviors and depressive symptoms for girls than for boys.
- e. Adolescent connectedness to members of the congregation would be a stronger buffer of the relationships between school connectedness and early adolescent delinquent behaviors and depressive symptoms for girls than for boys.
- f. Spiritual connectedness would be a stronger buffer of the relationships between school connectedness and early adolescent delinquent behaviors and depressive symptoms for girls than for boys.

Definition of Terms

Conduct Problems – a type of externalizing problem, conduct problems are socially problematic behaviors that include fighting, hitting, threatening others, pushing and shoving. These may also be referred to as less serious delinquent behaviors.

Congregational Connectedness – a type of religious connectedness, this concept describes the degree of adolescent closeness with his youth leader as well as members of his congregation.

Delinquent Behaviors – a type of externalizing problem, delinquent behaviors are socially problematic behaviors that include fighting, lying, cheating, taking other people's belongings, and frequent loss of temper. The 10-item delinquent behavior

subscale from the Multiple Problem Behavior Index (MPBI; Jessor et al., 2003) can be divided into two subscales, “less serious delinquent behaviors” and “more serious delinquent behaviors.” Less serious behaviors include cheating on homework or tests, lying to a teacher or parents, hitting another student, etc. More serious behaviors typically have legal ramifications and include shoplifting from a store and carrying a weapon at school.

Depressive Symptoms – a type of internalizing problem that includes symptoms representing cognitive and somatic aspects of depression as measured by the 20-item Centers for Epidemiological Studies Depression Scale for Children (CES-DC).

Early Adolescents – children between the ages of 10–14 years, which corresponds to the middle school period.

Externalizing Problems – psychosocial problems manifested through outward behaviors that are socially unacceptable. This is an umbrella term of problem behavior that includes substance use/abuse, delinquent behavior, sexual activity, and conduct problems.

Family Connectedness – concept used to describe adolescent feeling of closeness with his parents and/or family as characterized by the degree of warmth, trust, conflict, togetherness, and fun shared between family members. Family connectedness will be measured by The Parent Attachment scale from the Inventory of Parent and Peer Attachment – Revised (IPPA-R; Gullone & Robinson, 2005) for children.

Internalizing Problems – psychosocial problems that are manifested emotionally. This is an umbrella term that includes depressive symptoms, social anxiety, and being socially withdrawn.

Problem Behavior – socially unacceptable behavior, including conduct problems, delinquent behavior, sexual activity, and substance use and abuse. This term can be used interchangeably with “externalizing problems.”

Protective Factor – an individual (personal) or contextual factor that offsets the negative impact of a risk factor on developmental outcomes. Statistically expressed by an interaction term, it is a factor that “protects” the individual from experiencing negative outcomes, by lowering or eliminating the outcome occurrence, when he has an elevated risk of the outcome due to one or more risk factors.

Religious Connectedness – concept stemming from the interaction of the individual with the religious environment, characterized by a sense of closeness with others such as the youth leader and other members of the religious community and closeness with God, whomever his God may be (spiritual connectedness). The components of religious connectedness were measured by the youth leader and congregation member support (connectedness) scales and Attachment to God Inventory (AGI; Rowatt & Kirkpatrick, 2002).

School Connectedness – concept stemming from the interaction of the individual with the school environment, characterized by a sense that teachers treat students fairly, a sense of closeness to people at school, and feeling part of the school. School

connectedness was measured using 5 items established by Resnick and colleagues (1997) from the National Longitudinal Study on Adolescent Health.

Spiritual Connectedness - a type of religious connectedness, this concept describes the degree of adolescent feeling of closeness with God, whomever his God may be.

Spiritual connectedness was measured by the Attachment to God Inventory (AGI; Rowatt & Kirkpatrick, 2002).

Significance of Study

This study was designed to extend the research regarding contextual influences on early adolescent developmental outcomes to consider the context of religion. During adolescence the individual broadens his involvements beyond the family and school, providing additional opportunities to develop relationships with others independent of his parents. The religious setting enables relationships to form and can foster a sense of belongingness or connection by offering a variety of classes (e.g., Bible study), retreats, and volunteer opportunities with which the adolescent may become involved. This research examined the relationship of adolescent feeling of connectedness to his religious youth leader and members of his congregation as well as to God (whoever his God is). Additionally, it explored the possible protective effect of these connections for early adolescents at an elevated risk of experiencing depressive symptoms and delinquent behavior.

CHAPTER 2: REVIEW OF THE LITERATURE

The Developing Adolescent

Adolescence is a period of growth and development wherein the adolescent is likely transitioning to and attending a new and larger school (middle school and high school), interacting with more diverse people (Lerner & Galambos, 1998; Eccles et al., 1993), increasing interactions in groups outside of the family, and seeking greater autonomy (Lerner & Galambos, 1998; Allen, Hauser, Bell, & O'Connor, 1994). With these changes comes a greater opportunity for influence by others outside of the family. Because it is a main component in fostering positive adolescent development and psychosocial maturity, maintaining a strong parent-adolescent connection, characterized by parental warmth and involvement, during this period is important (Steinberg, 2001; Gray & Steinberg, 1999). These changes occurring in adolescent lives require parents to be flexible in order to consistently maintain a strong connection with the developing adolescent (Galambos & Ehrenberg, 1997). It is during this time that both internalizing (e.g., depressive symptoms) and externalizing (e.g., delinquent behavior) problems become increasingly likely for the adolescent.

Adolescent Problematic Developmental Outcomes

Depressive symptoms, a type of internalizing problem, include increased levels of sadness, irritability, inability to make decisions, lack of interest in daily activities, and changes in sleeping and eating patterns. These symptoms are similar to those used in the clinical diagnosis of depression disorders, which also requires a clinical examination. As

many as 18% of early adolescents across the nation report experiencing depressive symptoms (Saluja et al., 2004). Gender differences in the experience of depressive symptoms also begin to occur during early adolescence (Galambos, Leadbeater, & Barker, 2004; Saluja et al., 2004; Sund & Wichstrom, 2002; Leadbeater, Kuperminc, Blatt, & Hertzog, 1999). In a nationally representative sample of 9863 students in grades 6, 8, and 10 (ages 11, 13, and 15 years), Saluja and colleagues (2004) found 7% of boys and 13% of girls in 6th grade reported experiencing depressive symptoms. These figures increased for 8th graders where 10% of boys and 30% of girls reported depressive symptoms. Additional increases were noted by 10th graders, where 14% of boys and 34% of girls experienced depressive symptoms. It was during the middle school years (6th through 8th grades) that the largest rate of increase was experienced, indicating this period may be a particularly vulnerable time for the developing adolescent.

Adolescents experiencing increased levels of depressive symptoms are a concern because these adolescents tend to experience other internalizing and externalizing problems. These problems include risky sexual behavior and early pregnancy, smoking and other substance use (Escobedo, Reddy & Giovino, 1998; Brooks, Harris, Thrall, & Woods, 2002), as well as an increased risk of anxiety, eating and conduct disorders (Weissman et al., 1999; Brooks et al., 2002). Additionally, depressive symptoms are strong predictors of the occurrence of major depression episodes during adolescence and throughout adulthood (Pine, Cohen, Cohen, & Brook, 1999; Birmaher et al., 1996).

Alternatively, externalizing problems include substance use/abuse, sexual activity, conduct problems or less serious delinquent behaviors (e.g., hitting, shoving, threatening

others) and delinquency (e.g., lying, cheating on tests, stealing, carrying a weapon).

When considering these adolescent externalizing problems, a distinction is made between experimentation and enduring, or persisting, patterns of the behavior. Most adolescents at some time may engage in problem behavior, but often this experimentation (typically with less serious delinquent behaviors) will peak during middle adolescence (ages 15-18 years) and then decrease as the adolescent grows towards adulthood (Loeber & Hay, 2004; Steinberg & Morris, 2001). Additionally, boys tend to experience externalizing problems more than girls, in part due to socialization expectancies that promote assertiveness by boys more than girls (Leadbeater et al., 1999). The experience of problem behavior is established as moderately to highly stable throughout childhood and adolescence and into early adulthood (Cummings, Iannotti, & Zahn-Waxler, 1989; Huesmann, Eron, Lefkowitz, & Walkder, 1984). For example, one study showed that children who exhibited higher levels of problem behavior relative to their peers at 8 years old maintained the higher levels of problem behavior relative to their peers at 30 years old (Huesmann et al., 1984).

Although minor or less serious problem behaviors such as hitting others is seen as early as the toddler years, it is during the middle school years (ages 10-14 years) that a sharp increase in physical fighting has been noted (Loeber, Keenan & Zhang, 1997). More serious forms of violence, such as using a weapon in a fight, will also increase with age, especially during adolescence (Jessor & Jessor, 1977). The younger the adolescent is when he first begins engaging in problem behavior, the more likely his behavior will escalate to a more serious level. High school students who report higher levels of

problem behavior are more likely than their peers to start these actions prior to high school (Wiesner & Windle, 2004). Moreover, conduct problems or less serious delinquent behaviors such as hitting and shoving early in life predict violence including convicted criminal behavior and spousal abuse later in life (Huesmann et al., 1984). Although not all adolescents who display conduct problems progress to violent acts, most violent offenders displayed high levels of conduct problems in their youth (Loeber & Hay, 2004; Huesmann et al., 1984).

Early adolescence appears to be a vulnerable developmental period during which an increase in depressive symptoms and externalizing problems may occur. This is also a time when the adolescent transitions to a new school and interacts with new groups of people. These new relationships, or connections, have the opportunity to influence the adolescent's development and may have the ability to protect the adolescent from experiencing internalizing and externalizing problems.

Theoretical Foundations of Adolescent Connectedness

Two theories in particular explain how an adolescent's sense of connection to various contexts influences and shapes their development. These theories provide the foundation of this research.

Attachment Theory

The concept of attachment and its role in human development, beginning in infancy, has been extensively explored in the literature. According to attachment theory, the dynamic relationship between parent and infant strives to regulate proximity of the two parties to one another in order to maintain the infant's security and foster increasing

exploration of the environment (Ainsworth, 1989). A distressed infant uses signals such as crying to bring the parent near and provide security. Through these interactions with the parent, attachment style is developed. A secure or strong attachment reflects the infant's confidence that his parent will consistently and appropriately respond to his needs. Because of this security, the infant displays confidence in exploring the world with the understanding that the parent will respond should the infant experience distress. Insecurity may develop, however, from too much attention as well as too little attention from the parent in relation to the infant's needs. When the parent is intrusive or overbearing to the infant, the infant will respond by avoiding close proximity to the parent in an effort to minimize discomfort of the parent's attention. On the other hand, parents who neglect the infant's needs or are not supportive of his independent exploration prohibit the infant's ability to derive security. The infant is unable to regulate his proximity to the parent and, therefore, does not develop confidence to explore the world around him (Cassidy & Berlin, 1994).

Attachment and Adolescents

Attachment styles established throughout infancy influence the manner in which individuals develop relationships with others throughout their life (Collins, Cooper, Albino, & Allard, 2002). The interaction between parent and child teaches the child his role within social relationships and serves as a "working model" for future relationships, specifically identifying how to interact with a partner in regards to the child's needs and the child's value within the relationship (Ainsworth, 1989). This working model establishes a foundation for the child when developing social relationships later in life.

As the child approaches adolescence, age-related developmental changes such as increasing responsibility and autonomy require parents to continuously change and flex in order to consistently meet the adolescent's needs (Galambos & Ehrenberg, 1997; Eccles et al., 1993). In adolescence, emotional availability of the parents outweighs the importance of physical proximity regarding a strong attachment (Allen, Moore, Kuperminc & Bell, 1998). Rather than physically being near his parents, it is the adolescent's experience and understanding of the parent's emotional availability that becomes primary in maintaining a strong attachment. If the parents are not emotionally available to the adolescent and he is unable to have his needs met from this relationship, then he is liable to experience depressive symptoms (Garber, Robinson, & Valentiner, 1997) or externalizing problems (Jessor, Van Den Bos, Vanderryn, Costa, & Turbin, 1995) in order to gain the desired attention. Attachment in adolescence has been referred to as the emotional bond, cohesion, or connection between the adolescent and parent.

As adolescents strive for greater responsibility and autonomy, their involvement with groups outside of the family increases. The adolescent's association with these different groups aids in his search for autonomy from his parents by providing relationships of his own independent of his parents. Further, his role within these groups may also provide additional responsibilities (e.g., helping to organize a fundraiser at church). These groups provide an additional source of influence for the developing adolescent.

Social Control Theory

As Attachment Theory explains the influential role of the child's relationship with his parents, Social Control Theory (Hirschi, 1969) helps in understanding the individual's relationship with social groups. According to Social Control Theory, a social bond is the connection an individual has with society, such as with the family, school, or religious organization. As control theories assume deviance or chaos and seek to explain why adolescents conform to societal rules of behavior, behavioral expectations are learned through the connection or bond an individual has with society. In order for adolescent behavior to conform to societal expectations, a social bond must exist such that it influences and motivates the adolescent to perform desired behaviors. It is when the social bond is weak or nonexistent that a person is more likely to engage in delinquent acts. There are four components of the social bond: attachment, commitment, involvement, and belief.

Attachment refers to the relationship an individual has to significant others, such as family members or teachers. It is the degree to which the adolescent has emotional ties to these people, identifies with them, and cares about their expectations. The stronger the attachment, the less likely the adolescent will engage in deviant behavior.

Commitment represents the aggregate investment of time, energy, and resources in society's conventional activities such as getting an education, holding a job, and participating in religious groups. These commitments represent 'stakes in conformity,' and adolescents with strong commitments to these conventional activities are not as likely to risk these stakes by engaging in deviant behavior.

The amount of time an adolescent spends engaging in the conventional activities (i.e., doing school work, participating in clubs, etc.) also contributes to the quality of the social bond. The more time invested in these activities, the less time the individual will have to engage in deviant behavior. The greater the involvement, the less time available to exhibit deviant behavior.

The final component contributing to the social bond is the adolescent's belief and acceptance of the conventional value system, which includes a general acceptance of the rules of society as being morally valid and binding as well as respect for authority. The stronger the belief, the less likely the individual will engage in deviant behavior.

When an adolescent is bonded or connected to conventional society by way of any one of these components, he is more likely to be connected in the other components as well. The stronger the overall connection, the greater influence the context will have on adolescent developmental outcomes. The weaker the overall connection, however, the more likely the adolescent will experience internalizing and externalizing problems.

The Family Context

The family environment is the primary contextual influence on an adolescent's development (Steinberg, 2001), providing intellectual, emotional, and social experiences that ideally will facilitate growth. Maintaining a supportive family environment, where there is a strong emotional connection between parent and adolescent, may help prevent the adolescent from experiencing depressive symptoms and problem behavior. Parent-adolescent connection is considered a core parenting component influencing adolescent psychosocial development (Galambos, Barker, & Almeida, 2003; Steinberg 2001;

Barber, 1997). A strong connection is formed when there is shared warmth and love between the parent and adolescent (Baumrind, 1992). The adolescent has a sense of acceptance by his parents (Gray & Steinberg, 1999) when the relationship is nurturing and supportive (Maccoby, 1992). This connection increases the adolescent's receptiveness to his parents, such that the adolescent is more likely to respond to the parent's guidance (Steinberg, 2001).

A variety of scales measuring the relationship between parent and adolescent exist. Although these scales are intended to measure somewhat different qualities of the relationship (e.g., trust, communication, and alienation versus love, responsiveness, and involvement), the items comprising these scales are similar. Like the variety of terms mentioned previously that describe the shared emotional connection, these scales resemble one another in their included items. For example, a common topic addressed across scales is working with one another to solve problems. The Acceptance-Involvement Scale, modified by Gray and Steinberg (1999) from the Children's Rating of Parental Behavior Inventory (CRPBI; Schluderman & Schluderman, 1970) includes the item "I can count on her to help me out if I have some kind of problem," the Inventory of Parent and Peer Attachment Revised Scale (IPPA; Armsden & Greenberg, 1987) states "I can depend on my parents to help me solve a problem," and the Family Adaptability and Cohesion Evaluation Scale IV (FACES-IV; Olson, Tiesel, & Gorall, 1996) uses "Family members consult other family members on decisions." The term "connection" or "connectedness" will be used when referring to the parent-adolescent bond in this

research proposal, but the terms of investigators will be used when discussing existing research.

Parent-Adolescent Connection and Adolescent Internalizing Outcomes

Families with low parent-adolescent connectedness are more likely to have adolescents experiencing a variety of internalizing problems than families with greater connections (Essau, 2004). These adolescents are more likely than their counterparts to report problems such as feeling overtired, depressed, nervous or worried, and irritable (Herman, Dornbusch, Herron, & Hertling, 1997), or experiencing social anxiety (Allen et al., 1998) and depressive symptoms (Allen et al., 1998; Laible, Carlo, & Raffaelli, 2000; Cicchetti & Toth, 1998; Garber et al., 1997). For example, Sund and Wichstrom (2002) examined the relationship between parent-adolescent attachment using the IPPA scale and adolescent depressive symptoms using a sample of 2,360 adolescents aged 12-14 years. Questionnaires were administered to the sample twice with a one-year interval. Multivariate regression analyses showed that even after time one depressive symptoms were taken into account, a weaker attachment to parents reported at time one was predictive of higher levels of reported depressive symptoms at time two. These results suggest that regardless of the initial level of depressive symptoms, low levels of adolescent-parent connectedness places the adolescent at an increased risk for subsequent depressive symptoms.

As previously discussed, strong attachment in adolescence hinges upon the adolescent's perception of parental emotional availability (Allen et al., 1998). Parent-adolescent connectedness (e.g., attachment) is stronger when adolescents perceive their

parents are emotionally available to them. Adolescents who perceive lower levels of connectedness with their parents, however, may develop feelings of low self-worth due to the inconsistent and inappropriate nature of having their needs met (Garber et al., 1997). Feelings of alienation, rejection, and unworthiness of love may result from experiences related to the weak connection and foster low self-worth. Low self-worth, in turn, may lead to the development of internalizing problems such as depressive symptoms (Garber et al., 1997).

Parent-Adolescent Connection and Adolescent Externalizing Outcomes

Low self-worth resulting from low levels of connection to parents may also lead to externalizing problems. In fact, engaging in externalizing problems may be a means, albeit an ineffective one, of coping with feelings of low self-worth and low confidence (Jessor et al., 1995). As Attachment Theory (Ainsworth, 1989) and Social Control Theory (Hirschi, 1969) state, attachment or connection to the parent represents the degree to which the adolescent identifies with his parents and cares about their expectations, including adolescent behavior. Not surprisingly, adolescent externalizing problems negatively relate to the quality of connection, or attachment, between parents and adolescents including problems such as hitting and threatening others (Allen et al., 1998; Loeber & Stouthamer-Loeber, 1998; Herman, Dornbusch, Herron, & Hertling, 1997; Marcus & Betzer, 1996; Gray & Steinberg, 1999).

The relationship of family connection to the development of adolescent externalizing problems is demonstrated in a study conducted by Sameroff, Peck and Eccles (2004). This study employed a longitudinal design with four points of data

collected from the primary caregiver and adolescents over a seven-year period. Results showed that a positive family climate (composite measure of quality of affective relationships, communication, and shared activities among family members) was negatively related to concurrent externalizing problems (e.g., hitting another person, lying to parents, stealing from a store) when adolescents were in the 7th (T1), 8th (T2), and 11th grades (T3). Family climate became increasingly influential as the adolescents grew older. Moreover, results indicated T1 family climate predicted T2 externalizing problems and T2 family climate predicted T3 externalizing problems, even after prior levels of externalizing problems were controlled. Thus, low levels of positive family climate not only contribute to the concurrent occurrence of adolescent externalizing problems, but also predict future problems.

When the Family is Not Enough

When adolescents are not strongly connected within the family, other contexts such as school and religious organizations may be able to provide the necessary experiences. Research suggests it is the act of meeting the adolescent's need for connection, regardless of the contextual source providing it, that promotes continued positive development (Way & Robinson, 2003; Dornbusch, Erickson, Laird, & Wong, 2001; Crosnoe, Erickson, & Dornbusch, 2003; Barber & Olsen, 1997). Barber and Olsen (1997) considered whether adolescents who do not experience positive socialization experiences within the family gain these experiences in other contexts. Support was found in this regard for 10-14 year old early adolescents, whereby non-family experiences became increasingly more relevant for the adolescents as the quality of

family experiences decreased. Non-family socialization experiences (e.g., consistent, positive emotional bond with a significant other who is not the adolescent's parent, such as a teacher or church leader) were less predictive of externalizing problems and depressive symptoms when adolescents reported high family socialization experiences. Those reporting average or low family socialization experiences had non-family socialization experiences that were more predictive of externalizing problems and depressive symptoms. The non-family connections protected those adolescents with low family connectedness from demonstrating externalizing problems and depressive symptoms. Clearly, non-family contexts have a role in adolescent developmental outcomes.

The School Context

When the contextual environment (e.g., the family) is not meeting the adolescent's needs, his motivation and interest in the environment will wane and the adolescent will feel less connected within that particular context (Eccles et al., 1993). Adolescent connections shift in importance toward the source providing the developmental experiences and away from those contexts that do not. As adolescents spend a large proportion of time in school, they have an increased opportunity to develop and be influenced by social connections in this context (McBride et al., 1995).

School as a Developmental Context

Early adolescence marks the transition from elementary school to middle school, which reflects a dramatic change in the scholastic environment. The middle school population is larger as is class sizes, increasing the teacher-to-student ratio and making it

more difficult for the teacher to cultivate a personal connection with each student (Eccles et al., 1993). Additionally, departmentalized teaching is utilized, which means students experience a greater number of teachers and less time spent per teacher, further challenging cultivation of teacher-adolescent connections (Eccles et al., 1993). As a result, there is less time for the teacher to foster positive individual connections with all students during the middle school class period.

As teachers interact directly and daily with adolescents, quality of the teacher-student relationship is particularly important to adolescent developmental outcomes. When early adolescents feel they can depend on their teacher to help when they have a social or personal problem at school, whether it is academic or emotional or both, the adolescent is less likely to experience feelings of alienation or emotional distress (Roeser, Eccles, & Sameroff, 1998). When the adolescent perceives teacher-student interactions as inequitable or unfair, these adolescents are more likely to report higher levels of distress, even when the adolescents have high levels of motivation and academic achievement (e.g., grade point average) (Roeser et al., 1998). If the social environment of middle school does not fit or match the psychosocial needs of the adolescent, then the adolescent will likely experience a decrease in motivation, interest, performance and an increase in emotional distress (Roeser et al., 1998; Eccles, et al., 1993). An ill-fitting middle school environment and its potential negative effect on teacher-adolescent relationship may be particularly deleterious to those adolescents who do not have strong connections at home (Way & Robinson, 2003; Roalson & Loukas, 2004).

School Connectedness and Adolescent Internalizing Outcomes

Despite the amount of time adolescents spend in school, empirical evidence of the relationship between school connectedness (i.e., adolescent perception of belongingness and feeling close to others at school) and adolescent outcomes has predominantly focused on externalizing problems. Little research has considered adolescent internalizing problems as related to school connectedness, although there is evidence suggesting such. As Social Control Theory (Hirschi, 1969) suggests, a social bond established with a group outside of the family, such as attachment with a teacher or others at school, is influential in minimizing adverse adolescent outcomes. The small body of research examining internalizing outcomes and school connectedness suggests a relationship exists. Feelings of connection to the school have been negatively associated with internalizing problems including depressive symptoms among early and middle adolescents (O'Donnell, Schwab-Stone, & Muyeed, 2002; Barber & Olsen, 1997) and with serious thoughts of committing or attempting suicide among adolescents enrolled in grades 7 through 12 (Resnick, et al., 1997). Additionally, adolescent perceptions of positive teacher regard are significantly associated with lower levels of adolescent depressive symptoms, whereas perceptions of negative teacher regard are related to elevated levels of depressive symptoms (Roeser et al., 1998). Positive teacher regard even predicts declines in reported levels of adolescent depressive symptoms one year later (Roeser et al., 1998).

School Connectedness and Adolescent Externalizing Outcomes

A variety of adolescent externalizing problems have been associated with low levels of school connectedness, including violence, alcohol use, cigarette and marijuana use, onset of sexual activity (Resnick, et al., 1997), destroying other's property, and running away from home (Barber & Olsen, 1997). Dornbusch, Erickson, Laird, and Wong (2001) explored the relationship between school connectedness using the school connectedness scale from the National Longitudinal Study of Adolescent Health (Add Health; Resnick, et al., 1997) and a variety of adolescent externalizing problems. Using Waves one and two (one year interval) of the Add Health, data from 13,568 adolescents in the 7th through 12th grades were examined. Researchers found that a stronger level of connection to the school was related to decreased prevalence of cigarette and marijuana use and delinquent and violent behavior such as fighting, intentional injury to another, carrying a weapon and using a weapon. Interestingly, school connectedness also predicted delayed initiation of these externalizing problems one year later, although this relationship was not as strong when adolescents were already engaged in the problem behavior.

Another longitudinal study demonstrated the protective effects of teacher-student bonding against adolescent externalizing problems. Crosnoe, Erickson, and Dornbusch (2002) analyzed data collected at two time points, one year apart, from 3,046 high school adolescents. Using hierarchical regression analyses, researchers found student-teacher bonding protected adolescents who reported having deviant friends from exhibiting externalizing problems. Specifically, girls with deviant friends who experienced higher

levels of teacher bonding were less likely to report engaging in delinquent behaviors (e.g., stealing, carrying a weapon, intentionally damaging property belonging to someone else), and illegal drug use. Higher levels of teacher bonding protected the boys with deviant friends from using tobacco and marijuana. The stronger the connection between teacher and student, the less likely the student was to engage in these externalizing problems. Furthermore, the girls experienced a protective effect from parental involvement (e.g., items included “I can count on my mother and father to help me out if I have some kind of problem,” “My parents spend time just talking with me”) such that girls with deviant friends who reported higher levels of parental involvement were less likely to engage in illegal drug use. The researchers concluded that interpersonal relationships were particularly important for girls in buffering them from the influence of deviant friends. The stronger the connection between teacher and student, the less likely the student was to engage in these externalizing problems.

Multiple Contexts

Although adolescents interact and function within a variety of contexts, existing research on adolescent development has predominantly examined independent effects of the contexts (Dornbusch, Erickson, Laird, & Wong, 2001; Crosnoe et al., 2002; Eccles, Early, Frasier, Belansky, & McCarthy, 1997; O’Donnell et al., 2002). That is, the majority of research has focused on the role of adolescent connection to parents or to the school without considering the role of both contexts simultaneously on adolescent outcomes. Way and Robinson (2003) extended this research by considering the combined effects of the family and school contexts on adolescent internalizing problems including

depressive symptoms. In this study, 100 adolescents (mean age = 14.2 years at time 1) completed surveys during their freshman year in high school and again 2 years later. Using hierarchical regression analyses, support was found for the positive effects of family support, friendship support, and perceived school climate (i.e., a composite of student-student relations, student-teacher relations, and order and discipline in the school) on adolescent depressive symptoms. Post hoc analyses determined family support to be significantly related to the change in depressive symptoms over and above the contributions of both friendship support and perceived school climate. Additionally, perceived school climate contributed significantly over and above the effects of family support and friendship support. These findings demonstrate that the various contexts within which adolescents interact all may influence, in combination and uniquely, adolescent internalizing problems.

Limited evidence exists in the adolescent contextual research, however, that demonstrates how one context may moderate, by buffering or exacerbating, the effects of another context. Statistically, a moderating relationship is operationalized by computing an interactive term between the two variables. When one variable buffers or decreases the negative effects of another variable, it is termed a protective factor. Barber and Olsen (1997) explored this idea by examining the effects of adolescent socialization experiences provided by four contexts (family, peer, school, and neighborhood) on adolescent outcomes. Socialization experiences refer to emotional bonds with significant others, behavioral limitations, and support of personal expression of thoughts and emotions. These researchers used a composite variable of all “other contexts” as the interactive term

with a given context, such that they computed Family X Non-family where non-family was comprised of the peer, school and neighborhood contexts together. Results indicate that when low levels of socialization experiences were provided by one context such as the family, then the non-family experiences became more important in regards to adolescent outcomes including depressive symptoms and problem behavior.

Barber and Olsen (1997) suggest that a good connection in one context may compensate for a bad connection in another. But their study was not able to determine which specific context(s) acted as the protective factor. Costa and colleagues (2005), however, were able to demonstrate that one context may protect an adolescent from the negative consequences of another context. In this study, 1596 American adolescents in grades 7, 8, and 9 reported on a variety of externalizing problems, including delinquent behavior, tobacco and alcohol use, as well as three protective factors and three risk factors in each of four contexts (family, peers, school, neighborhood). Protective factors included model protection (represents key models that are engaged in conventional organizations and prosocial pastimes such as volunteer work), controls protection (represents rules and sanctions) and support protection (perceived social support). Results indicated that protective factors within each context buffered the effect of risk in the other three contexts. Of particular interest, the protective factor of support protection in the school context offset the deleterious effects of models risk in the peer group on adolescent externalizing problems. Adolescents with deviant friends who reported higher levels of support from the school context exhibited fewer externalizing problems than did their peers.

Despite the importance of the school context, relatively little research beyond the Costa et al. (2005) study examines the question of whether adolescent perception of school connectedness moderates the relationship between family connectedness and adolescent outcomes. Roalson and Loukas (2004) examined such a relationship and found that school connectedness moderated the relationship between poor family relations and adolescent conduct problems (e.g., pushing, shoving) one year later in a sample of 449 6th and 7th grade students. Even after controlling for baseline levels of conduct problems, adolescents reporting poor family relations and low levels of school connectedness had elevated levels of conduct problems. At high levels of school connectedness, however, adolescents with higher levels of poor family relations reported lower levels of conduct problems. These findings indicate that school connectedness protected adolescents experiencing poor family relations from increased levels of conduct problems one year later. Additional studies are needed to replicate and further consider moderating effects of one context to another context as related to adolescent developmental outcomes. Furthermore, research has not expanded far beyond the contexts of family and school as developmental influences on the adolescent even though the adolescent is often involved in other contexts. One such context that may be particularly relevant to adolescent outcomes is religion.

The Religious Context

Adolescent Religiosity

Until recently, the scientific community maintained little interest in examining religion in the lives of adolescents. Historically, perhaps the most common measurement

of religion was a single item addressing frequency of church service attendance. At best, research studies have included a handful of items pertaining to religion on surveys, but these items generally are too few and narrow in scope to provide an in depth understanding of the construct of religion. Of the national youth survey data sets available at the turn of the century, Smith, Denton, Faris, and Regnerus (2002; Smith, Faris, Denton, & Regnerus, 2003) identified three that included six or more items regarding religion. These data sets were Monitoring the Future (1996), Survey of Adolescent Health (1995), and The Survey of Parents and Youth (1998). In order to gain insight into religion in the lives of American adolescents, aged 13-18 years, the researchers reported descriptive statistics regarding youth participation (religious affiliation, service attendance, church youth group participation), religiosity (importance of religion, frequency of prayer, born again status), and attitudes of alienation towards religion (agreement with parents, approval of churches, desired influence of churches, financial donations to churches).

Findings from these three studies illuminated religion as a prominent and important component in the lives of a large proportion of the adolescents. For example, more than one-third of adolescent respondents report attending church services weekly and 56% report involvement in a church youth group for at least the past year (Smith et al., 2002). Faith appears to be an important element in the lives of adolescents. Approximately 60% of adolescent respondents indicate their faith is “very important” (31%) or “pretty important” (30%) (Smith et al., 2003). The majority of adolescents engage in prayer on a somewhat regular basis, whereby 40% report praying daily and

22% report praying weekly (Smith et al., 2003). Importance of faith and frequency of prayer are highly correlated such that the more important faith is to an adolescent, the more likely the adolescent is to pray and pray often. Girls report higher levels of importance of faith and greater frequency of prayer as compared to boys. Whereas participation in service attendance and youth group participation decline somewhat across the high school years, the importance of faith and frequency of prayer remain stable across this same period of time (Smith et al., 2003). As an adolescent gains greater autonomy (i.e., earning a driver's license) and increases his involvement in other activities, time otherwise spent in church services and youth groups may be reallocated to other responsibilities and commitments. Although the adolescent may spend less time in church services and youth groups, this does not equate to a decrease in the level of importance the adolescent maintains of his faith and faith practices such as prayer.

Based on the aforementioned descriptive statistics, religion is clearly important to most adolescents. The majority of adolescents maintain faith is important and express positive regard towards it. They commit time to attending religious services as well as the private practice of prayer. Because religion is prominent in the lives of adolescents, consideration of the religious context and its influence on adolescent outcomes is prudent.

The Religious Context and Adolescent Development

A variety of characteristics unique to the religious environment (e.g., a common belief system among members) provide opportunity to influence adolescent development. Although the scientific literature exploring the role of religion in adolescent development

is young, several dimensions of religion are proposed to influence adolescent development (Smith, 2003a). These dimensions relate to and exemplify each of the four components comprising the societal bond of Social Control Theory: belief, attachment, commitment, and involvement.

Unlike the school context, members of a religious group are unified by a common belief system and shared traditions (Smith, 2003a). These beliefs encompass a normative understanding among members of the particular religious group that identifies what is right and wrong, good and bad, etc. Religion provides normative standards and guidelines that address self-control and personal virtue and worth based on historical traditions and narratives (Smith, 2003a). These moral directives aid the adolescent in making choices and decisions (Cochran, Beeghley, & Bock, 1988). Internalization of moral directives occurs through spiritual experiences, for example receiving an answer to prayer or perceived divine intervention, which reinforce the moral order. Religious organizations often support these experiences, by way of facilitating the experience (e.g., a faith conversion) or through reflected observation by other members of the faith, fostering incorporation into the adolescent's identity and beliefs. These experiences may be particularly salient to the adolescent due to the process of individuation and identity seeking that occurs during this developmental period. Internalization of the moral order brings acceptance of the normative beliefs and values by the adolescent, strengthening the adolescent's bond with the religious group and guiding behavior (Pearce, Jones, Schwab-Stone, & Ruchkin, 2003). When acting outside of the religious norm, the resulting feelings of guilt and shame may serve as a deterrent to the adolescent and

decrease the likelihood the adolescent will engage in problem behavior (Ellison & Levin, 1998).

A variety of role models exist supporting the moral order within the religious environment. Sacred texts provide stories of people with regard to the moral order, demonstrating positive outcomes from living by the order as well as consequences when failing to do so. The adolescent may identify with a particular persons' story and gain insight or guidance for daily situations. Additionally, living role models are prevalent within the organization as well, such as fellow congregants, elders, and youth leaders (Smith, 2003a). According to Social Control Theory, the degree to which the adolescent has emotional ties with these individuals, identifies with them, and cares about their expectations, the less likely the adolescent will experience internalizing or externalizing problems. For example, when an adolescent anticipates positive support from congregation members, that adolescent is more likely to report lower levels of depressive symptoms while an adolescent who experiences higher levels of negative interactions with congregation members tends to experience greater levels of depressive symptoms (Pearce, Little, & Perez, 2003). Therefore, as relationships develop between the adolescent and individuals within the religious organization, the adolescent is more likely to embrace the directives and subsequently is less likely to experience problematic outcomes. Due to their direct interactions with and opportunity to develop personal relationships with adolescents, youth leaders in particular may have an important role in developmental outcomes. However, very little research on this relationship currently exists.

The religious environment also provides opportunity to learn new skills and knowledge that enhance well-being and life skills. Religious organizations are predominantly supported and run by congregation members, providing a significant amount of instrumental support to the operation of the organization. Opportunities such as organizing a retreat, facilitating a Bible study class, or participating in service work are available for adolescents to observe, learn and develop life and leadership skills as well as self-confidence. The greater the adolescent's commitment to participating in these activities, as determined by his investment of time, energy and resources, the stronger his bond will be with the religious organization (Youniss, McLellan, & Yates, 1999). Furthermore, the religious-based opportunities allow adolescents to participate more intimately in the organizational operations, enhancing a sense of belongingness within the group.

Lastly, religion offers social and organizational relationships that may shape social and professional opportunities. Unlike schools and other social groups, religion does not segregate its population by age. Instead, religion emphasizes personal interactions across generations, allowing adolescents greater access to more adults and the establishment of cross-generational ties with other congregation members. Therefore, adolescents have greater opportunities for adult guidance and modeling and caring relationships with accountability to more adults (Smith, 2003b). As these relationships are formed within the religious organization, a common moral order is embraced and leads to greater number of authority figures to discourage negative and encourage positive life practices by the adolescent (Krause, Ellison, Shaw, Marcum, & Boardman,

2001). In summation, religious organizations demonstrate a variety of characteristics that may influence adolescent adjustment. Theory and empirical research suggest that the greater acceptance the adolescent has of the belief system, attachments to others within the religious organization, and the more involved and committed to activities within the organization, the less likely the adolescent will experience adjustment problems.

Parental Religiosity

Parental religiosity appears to be the strongest predictor of adolescent religiosity (Smith & Sikkink, 2003). People tend to maintain friendships with others who are similar to them, such that religious individuals are likely to have friends who share their religious beliefs. When the parent(s) and adolescent are involved in a religious institution, friendships sharing a common religious belief are more likely to develop. Involvement in a religious institution, then, may yield a close social network for the families. Interactions with this social network likely will promote a more stringent means of social control of the shared beliefs and moral values. Thus, behavioral expectations are more broadly reinforced to the adolescent through the entire social network. If the adolescent does not feel connected to this network, however, these social ties may not be as salient in shaping adolescent behavior (c.f., Eccles et al., 1993; McBride et al., 1995).

Religion and Adolescent Internalizing Problems

Although research examining the relationship between religiosity and adolescent depressive symptoms is still young, there appears to be an inverse relationship such that adolescent religiosity is associated with lower levels of depressive symptoms (Mosher & Handal, 1997; Wright, Frost, & Wisecarver, 1993; Pearce et al., 2003; Schapman &

Inderbitzen-Nolan, 2002). In a cross-sectional study of 451 high school students, Wright et al. (1993) asked participants to complete questionnaires regarding church attendance, spiritual support (comprised of two items, “Religion is especially important to me because it answers many questions about the meaning of my life,” and “I try hard to carry my religion into my other dealings in life because my religious beliefs are what really lie behind my whole approach to life”), and depressive symptoms. Gender differences existed in reports of church service attendance and depressive symptoms, whereby girls attended services more frequently and reported significantly higher mean levels of depressive symptoms. Results indicated that all adolescents, both boys and girls, who attended church services more frequently reported lower levels of depressive symptoms than their peers who attended less frequently. Likewise, those boys and girls who experienced higher levels of spiritual support also experienced lower levels of depressive symptoms than their counterparts. Unfortunately, the researchers did not examine whether the effects of attendance and spiritual support on depressive symptoms varied in strength for girls and boys. With greater attendance comes an increased opportunity for interpersonal relationships to form. Research indicates that girls are particularly sensitive to quality of interpersonal relationships likely due to socialization towards these concerns (Leadbeater et al., 1999). It may be that since the girls attended services more frequently than the boys and interpersonal relationships are more potent for the girls’ adjustment, then the girls may experience a greater effect on depressive symptoms than that of the boys.

Pearce and colleagues (2003) considered whether interpersonal religious experiences may be a better predictor of depressive symptoms than religious service attendance. Specifically, interpersonal experiences include perceived positive support the adolescent anticipates from the congregation and negative interactions the adolescent has had with member of the congregation. Using hierarchical regression models to analyze cross-sectional data collected from 7th, 8th, and 9th grade students ($n=744$), these researchers found attendance, private religious practices (e.g., prayer), and self-ranked religiosity (e.g., extent to which you are a religious and spiritual person) together accounted for a small (3%) but significant portion of the variance in depressive symptoms beyond that of demographic variables. Interpersonal religious experiences, however, demonstrated a significant modest contribution (6%) to the variance of depressive symptoms above and beyond that of both the demographic variables and standard religious variables previously stated. As expected, adolescents who reported higher levels of anticipated positive support from the congregation were more likely to report lower levels of depressive symptoms. Those who reported higher levels of negative interactions with members from the congregation tended to report higher levels of depressive symptoms.

Religion and Adolescent Externalizing Problems

Religiosity has also been negatively correlated with a variety of adolescent externalizing problems including carrying a weapon, binge drinking, marijuana use, cigarette smoking and premarital sexual intercourse (Wallace & Forman, 2006; Donahue & Benson, 1995; Jessor et al., 1995). In a study of 532 urban public high school youth,

Corwyn and Benda (2000) found personal religiosity, such as private prayer and Bible study, was a better predictor of hard drug use including cocaine and heroin than was church attendance. The higher level of personal religiosity an adolescent reported, the less likely he was to use hard drugs. This relationship was strong such that with each increased interval of the personal religiosity score, adolescents were half as likely to use drugs. The researchers concluded that personal religiosity is indicative of a personal commitment to religious beliefs and practices, which is probably why it was a stronger predictor of drug use than was church attendance measures.

Externalizing problems, such as delinquency (e.g., stealing, lying, carrying a weapon) and conduct problems (e.g., hitting, shoving), also appear to be negatively correlated with adolescent religiosity. Baier and Wright (2001) conducted a meta-analysis of 60 studies concerning the effect of adolescent religiosity on delinquent behavior. The studies analyzed both behavioral measures of religiosity, such as church attendance, prayer, and listening to religious programming on the radio and television, as well as attitudinal measures which included beliefs, importance of religion in daily life, and perceived level of personal religiousness. Religiosity, regardless of type (e.g., behavioral or attitudinal), was determined to have a statistically significant moderate effect ($p < .05$). Simons, Simons, and Conger (2004) conducted secondary analyses using data collected from 7th graders and their families in the Iowa Youth and Families Project (IYFP, $n=451$) and Family and Community Health Study (FACHS, $n=867$). Researchers found religious youth, as defined by a 15-item scale regarding religious participation and commitment, were less likely to engage in delinquent behaviors as compared to their nonreligious peers

(Simons et al., 2004). Religious adolescents were more likely to view delinquent behaviors as morally unacceptable and maintain friendships with like-minded peers, so they were less likely to initiate or be persuaded to perform delinquent acts (Simons et al., 2004). Likewise, adolescent religiosity is associated with fewer conduct problems such as pushing and shoving (Johnson, Joon Jang, Larson, & De Li, 2001) and is predictive of adolescent conduct problems one year later (Pearce, Jones, et al., 2003).

Statement of Purpose

Religion is prominent in the lives of American adolescents, with many adolescents regularly involved via attending services or other activities and the majority of them, 60%, claiming their faith is important (Smith et al., 2003). As religion is widely embraced by so many adolescents, examination of its influence in the lives of adolescents is prudent. Due to the variety of interpersonal interactions and the promotion of its belief system, this context is capable of fostering adolescent feeling of connectedness to the congregation via youth leaders and other members of the congregation and God (e.g., spiritual connectedness), whomever their God may be, and influencing developmental outcomes.

Barber and Olsen (1997) suggested that adolescent connection to one context may compensate for the lack of connection in another context and protect adolescents from experiencing internalizing and externalizing problems. Further support has been reported for the protective effect of school connectedness on the ill effects of a poor family environment on adolescent outcomes (Roalson & Loukas, 2004). As religion is also an

important and prominent context in the lives of adolescents, it is plausible that adolescent religious connectedness provides a protective effect on developmental outcomes as well.

The present study was designed to examine the direct effect of religious connectedness on adolescent outcomes and how these effects may vary by gender. It extended the literature by testing if religious connectedness (defined by youth leader, congregation member, and spiritual connectedness) buffered the relationship between the family and school contexts with adolescent internalizing and externalizing outcomes.

Hypotheses

H1: Quality of family connectedness, school connectedness, and religious connectedness would each be directly related to early adolescent outcomes.

- a. Higher levels of family connectedness would be associated with fewer delinquent behaviors and fewer depressive symptoms.
- b. Higher levels of school connectedness would be associated with fewer delinquent behaviors and fewer depressive symptoms.
- c. Higher levels of religious connectedness, as measured by adolescent connection to the youth leader, would be associated with fewer delinquent behaviors and fewer depressive symptoms.
- d. Higher levels of religious connectedness, as measured by adolescent connection to members of the congregation, would be associated with fewer delinquent behaviors and fewer depressive symptoms.

- e. Higher levels of religious connectedness, as measured by adolescent connection to God (i.e., spiritual connectedness), would be associated with fewer delinquent behaviors and fewer depressive symptoms.
- H2: Religious connectedness would account for a unique proportion of the variance of early adolescent outcomes above and beyond the family and school contexts.
- a. Adolescent connectedness to the youth leader would account for a unique proportion of the variance of early adolescent delinquent behaviors and depressive symptoms above and beyond the family and school contexts.
 - b. Adolescent connectedness to members of the congregation would account for a unique proportion of the variance of early adolescent delinquent behaviors and depressive symptoms above and beyond the family and school contexts.
 - c. Spiritual connectedness would account for a unique proportion of the variance of early adolescent delinquent behaviors and depressive symptoms above and beyond the family and school contexts.
- H3: Religious connectedness would moderate, or buffer, the relationships between quality of family connectedness and school connectedness and early adolescent outcomes.
- a. Adolescent connectedness to the youth leader would buffer, or decrease, the effects of low levels of family connectedness on early adolescent delinquent behavior and depressive symptoms.

- b. Adolescent connectedness to members of the congregation would buffer, or decrease, the effects of low levels of family connectedness on early adolescent delinquent behavior and depressive symptoms.
- c. Spiritual connectedness would buffer, or decrease, the effects of low levels of family connectedness on early adolescent delinquent behavior and depressive symptoms.
- d. Adolescent connectedness to the youth leader would buffer, or decrease, the effects of low levels of school connectedness on early adolescent delinquent behavior and depressive symptoms.
- e. Adolescent connectedness to members of the congregation would buffer, or decrease, the effects of low levels of school connectedness on early adolescent delinquent behavior and depressive symptoms.
- f. Spiritual connectedness would buffer, or decrease, the effects of low levels of school connectedness on early adolescent delinquent behavior and depressive symptoms.

H4: The effects of family connectedness, school connectedness, and religious connectedness on early adolescent outcomes would vary by gender.

- a. The relationships between family connectedness and depressive symptoms and delinquent behavior would be stronger for girls than for boys.
- b. The relationships between school connectedness and depressive symptoms and delinquent behavior would be stronger for girls than for boys.

- c. The relationships between adolescent connectedness to the youth leader and depressive symptoms and delinquent behavior would be stronger for girls than for boys.
- d. The relationships between adolescent connectedness to members of the congregation and depressive symptoms and delinquent behavior would be stronger for girls than for boys.
- e. The relationships between spiritual connectedness and depressive symptoms and delinquent behavior would be stronger for girls than for boys.

H5: The moderating effect of religious connectedness on adolescent outcomes would vary by gender.

- a. Adolescent connectedness to the youth leader would be a stronger buffer of the relationships between family connectedness and early adolescent delinquent behaviors and depressive symptoms for girls than for boys.
- b. Adolescent connectedness to members of the congregation would be a stronger buffer of the relationships between family connectedness and early adolescent delinquent behaviors and depressive symptoms for girls than for boys.
- c. Spiritual connectedness would be a stronger buffer of the relationships between family connectedness and early adolescent delinquent behaviors and depressive symptoms for girls than for boys.
- d. Adolescent connectedness to the youth leader would be a stronger buffer of the relationships between school connectedness and early adolescent delinquent behaviors and depressive symptoms for girls than for boys.

- e. Adolescent connectedness to members of the congregation would be a stronger buffer of the relationships between school connectedness and early adolescent delinquent behaviors and depressive symptoms for girls than for boys.
- f. Spiritual connectedness would be a stronger buffer of the relationships between school connectedness and early adolescent delinquent behaviors and depressive symptoms for girls than for boys.

CHAPTER 3: METHODS

Research Design

A cross-sectional self-report survey research design was employed. Early adolescents reported on each of the independent variables (family environment, school connectedness, and each component of religious connectedness – youth leader, congregation member and spiritual connectedness) and dependent variables (delinquent behaviors and depressive symptoms).

Participants

The researcher recruited this early adolescent sample from a middle school located in Temple, Texas. Temple is a small city located in central Texas approximately 65 miles north of Austin, with a population of 54,514 according to the 2000 U.S. Census Bureau. The median household income is \$35,135 and the population's racial make-up is 69.8% White, 16.5% African-American, .5% Native American, 1.6% Asian or Pacific Islander, 9.2% other races, and 2.4% of the population report two or more races. With respect to ethnicity, 17.8% of the population is Hispanic or Latino and may be of any race, so U.S. Census Bureau includes these respondents in applicable race categories as well. There exist three middle schools in the city of Temple, whereby the zoning creates a similar demographic profile across all three schools. Additionally, there is a strong presence of religious organizations, with approximately 32 churches located within Temple as listed with the Temple Chamber of Commerce.

Researcher obtained permission to recruit participants from the 505 students enrolled in Bonham Middle School (6th – 8th grades). All students, both boys and girls ages 10-14 years, were invited to participate. Racially and ethnically, the student body was 49% non-Hispanic white, 30% Hispanic, 19% Black, 2% Asian, and <1% Native American. Of the 505 students enrolled at the school, 167 participated in this study wherein 58.1% ($n=97$) were girls and 41.9% ($n=70$) were boys. Ages of the participants ranged from 10–14 years, where .6% were 10 years old, 11.4% were 11 years old, 40.1% 12 year olds, 35.9% 13 year olds, and 12% 14 year olds. The racial/ethnic make-up of the sample included 47.3% non-Hispanic white, 12% Black or African-American, 34.1% Hispanic or Latino, 4.2% Asian or Asian-American, and 2.4% Native American. Active parental consent and active adolescent assent was obtained from all 167 participants. See Appendices A and B for consent and assent forms.

A power analysis, assuming power of .8, determined that a minimum sample size of 113 participants was needed to detect a 5% change in the overall model effect for the final (3rd) step in the hierarchical regression model which includes the two-way interaction term. This minimum sample size also yields power above .8 for all main effects. In addition, the sample size yields power above .95 for an overall model effect (7 predictors with overall model effect of .30). The researcher exceeded the minimum recommended participants.

Procedure

The researcher received approval from the principal of Bonham Middle School located in Temple, Texas (see Appendix C for approval letter), to recruit participants

from the student body and administer an anonymous survey during 30 minutes of the students' social studies class for 6th and 7th graders and elective classes for 8th graders. Three weeks prior to administration, letters describing the study and active consent forms were sent home with the students for review by parents. As middle school students sometimes lose or forget to take paperwork home to their parents, a second set of consent forms was sent home one week prior to administration with those students who had not already returned signed forms. Only students whose parents signed and returned the consent form indicating permission granted to the researcher were allowed to participate. Participation was encouraged by receipt of a free ice cream from the school's cafeteria to each student who returned a signed parental consent form, regardless of whether parents indicated their child was or was not allowed to take the survey. See Appendix D for copy of cover letter sent to parents.

A total of 485 students were provided consent forms to take home to their parents. Of these 485 students, 253 (52.2%) students returned the signed forms and received an ice cream coupon. Almost 90% of parents (224) who signed the consent form indicated permission for their adolescent(s) to participate in the survey. One student who received permission from his parents to participate refused to take the survey. Of the 50 8th graders who received permission to take the survey, 19 were ultimately not included in the study due to the numerous classrooms in which they were located and the disruption it would have caused. In addition to this survey, the campus was involved with two other events. Thirty students did not complete the survey due to an athletic event, drama production, or

absence from school that day. The final number of students who completed the survey was 174.

Four doctoral student volunteers were recruited from the Department of Kinesiology and Health Education at the University of Texas at Austin to aid in administering the survey. Prior to beginning the survey, researchers briefly described the study to participants with parental consent and explained its anonymous nature. Students were informed that they may decline participation at any time during the survey. The assent form was then read to the students who were asked to sign and return it to the researcher indicating they agreed to participate. Any student without parental consent or who declined to participate was asked to quietly read a book or work on a word search puzzle provided by the researcher. All research team volunteers read each item on the survey to the class in order to encourage compliance and account for variation of reading comprehension among students.

All completed surveys were collected by the researcher and taken to the Measurement and Evaluation Center at the University of Texas at Austin for scanning and data entry to Excel in order to eliminate potential of human error in data entry. After receiving the data, the researcher imported it into an SPSS spreadsheet and cleaned the data. Each participant's data was reviewed for item omission. Those participants who omitted half or more of the items comprising any particular construct (e.g., responded to only two of the five school connectedness items) were removed. As a result, seven participants were removed for missing data (final sample size was $n=167$). For those participants who omitted an item of a given construct, mean scores were calculated on the

remaining items comprising that given construct to determine the construct score for that participant. For example, a participant who completed items 1-4 out of the 5 comprising school connectedness, a mean score was calculated for the completed items 1-4. The resulting score represented that participant's reported level of school connectedness.

Instrumentation

Survey items and booklet are located in Appendices E and F.

Family Connectedness

The Parent Attachment scale from the Inventory of Parent and Peer Attachment – Revised (IPPA-R; Gullone & Robinson, 2005) for children was used to measure adolescent feeling of connection to his parent. There are 28-items that constitute this scale and consider the three relationship aspects of trust (degree of mutual understanding and respect), communication (extent and quality of spoken communication) and alienation (feelings of anger and interpersonal alienation). Participants were asked to rate the degree to which each item is true as it relates to their relationship with both parents. Responses were recorded using a 3-point Likert scale whereby 0=“never true,” 1=“sometimes true,” and 2=“always true.” A total score for the IPPA-R Parent Attachment scale was calculated by summing the trust and communication subscales and then subtracting the alienation subscale score. A higher score reflects greater family connectedness. The IPPA-R demonstrated good internal reliability with this early adolescent population across all three sub-scales, trust ($\alpha=.87$), communication ($\alpha=.79$), and alienation ($\alpha=.84$).

School Connectedness

Level of school connectedness was measured using 5 items established by Resnick and colleagues (1997) from the National Longitudinal Study on Adolescent Health. Adolescents assessed their feelings of connection with the school (e.g., ‘feel part of your school’) and others at school (e.g., ‘feel that teachers treat students fairly’ and ‘close to people at school’) using a 5-point scale ranging from 0 (“Strongly Disagree”) to 4 (“Strongly Agree”). A mean score was calculated for each participant reflecting his level of school connectedness such that higher scores reflect higher reported levels of school connectedness. This scale demonstrated good reliability as reflected in Cronbach’s $\alpha=.84$.

Religious Connectedness

This study examined religious connectedness from three different perspectives – adolescent feeling of connectedness to their youth leader and other members of the congregation as well as to God (whoever their God may be), which is termed “spiritual connectedness.” Each of these perspectives was considered independently of the other two in the models.

In the literature, there currently does not exist a scale to measure adolescent feeling of connectedness to others - neither youth leader nor members of the congregation - at their place of worship. The Religious Social Support Scale (RSSS; Fetzer Institute, 1999) is widely used in the adult literature, but the nature of the items is not particularly applicable for early adolescents (e.g., ‘If you were ill, how much would the people in your congregation be willing to help out,’ ‘How often do the people in your congregation

make too many demands on you?’). Therefore, the scales for youth leader connectedness and congregation member connectedness for this study were modeled after existing scales that measure teacher support (e.g., O’Donnell, Schwab-Stone, & Muyeed, 2002). For example, the youth leader connectedness scale included items such as ‘I care what my youth leader thinks of me’ and ‘My youth leader cares about how I’m doing.’ Adolescents assessed their feelings of connectedness to their youth leader or other members of the congregation using a 4-point Likert scale ranging from 0 (“Strongly Disagree”) to 3 (“Strongly Agree”). A mean score was calculated for each participant such that higher scores represented greater levels of connectedness to the youth leader or members of the congregation. Both the youth leader connectedness scale and congregation member connectedness scale demonstrated good reliability ($\alpha=.88$ and $\alpha=.91$, respectively).

Spiritual connectedness was measured using the Attachment to God Inventory (AGI; Rowatt & Kirkpatrick, 2002). This 9-item scale assessed respondent’s avoidance of intimacy with God (e.g., ‘God seems to have little or no interest in my personal problems,’ ‘I have a warm relationship with God’) and anxiety about abandonment (e.g., ‘God sometimes seems responsive to my needs, but sometimes not,’ ‘God sometimes seems very warm and other times very cold to me’). Adolescents were asked to indicate how much they agreed or disagreed with the statements using a 4-point Likert scale ranging from 0 (“Stongly Disagree”) to 3 (“Strongly Agree”). Six items (i.e., item 1, 2, 3, 7, 8, and 9) were reverse scored and then a mean score was calculated for each

participant. Higher scores represented higher levels of spiritual connectedness. Internal reliability for this sample of early adolescents for this scale was Cronbach's $\alpha=.76$.

Delinquent Behavior

The delinquent behavior subscale from the Multiple Problem Behavior Index (MPBI; Jessor, Turbin, Costa, Dong, Zhang & Wang, 2003) was used to measure early adolescent delinquent behavior. The subscale consists of 10-items that measure general delinquent behaviors such as theft, vandalism and physical aggression. Participants were asked how often they have engaged in the various behaviors during the previous 6 months. Responses were based on a 5-point Likert scale ranging from "never" to "5 or more times." Mean scores were calculated for each participant where higher scores reflect greater delinquent behavior.

To determine if the items on the delinquent scale comprised more than one subscale, a Principal Axis Factor Analysis with a Varimax rotation was conducted and absolute values less than .40 were suppressed for the analysis. All items successfully loaded and the factor analysis identified two factors explaining 31.23% and 20.23% of the variance, respectively. One item ('damaged or marked up public or private property on purpose') cross-loaded on both factors, so the item was removed from this study. The results of this factor analysis support two delinquent behaviors subscales: less serious delinquent behaviors ($n=7$) and more serious delinquent behaviors ($n=2$). Less serious and more serious delinquent behaviors were examined separately in all analyses. Less serious delinquent behaviors demonstrated good internal reliability ($\alpha=.85$), whereas

more serious delinquent behaviors demonstrated an acceptable level of reliability of $\alpha=.66$.

Depressive Symptoms

The Centers for Epidemiological Studies Depression Scale for Children (CES-DC) was used to measure adolescent depressive symptoms. The CES-DC is comprised of 20-items that focus on cognitive and affective symptoms. Participants were asked to consider how they felt or acted during the previous week, scoring each item on a scale from 0 (“Not at all”) to 3 (“A Lot”). The mean of each participant’s item scores was calculated to represent his level of depressive symptoms, such that higher scores represent higher levels of reported depressive symptoms. The CES-DC is highly correlated with the Beck Depression Inventory, which is widely used to detect depression in adolescents, indicating the two scales are comparable in measuring depressive symptoms in the adolescent population (Wilcox, Field, Prodromidis, Scafidi, 1998). A coefficient $\alpha=.92$ was demonstrated for the CES-DC in this sample.

CHAPTER 4: RESULTS

Preliminary Analyses

Preliminary analyses were conducted to identify participants' religious affiliation and determine how involved students were in their religion. The two largest reported religious groups were Catholic (34.1%) and Fundamentalist/Evangelical (40.7%), all other participants reported their religious affiliation as Protestant (15.6%), non-Christian (2.4%), and 7.2% reported having no religious affiliation. A large proportion of the sample reported frequent involvement in their religious organization. Just over half (52.7%) of the participants attend religious services "once or more each week" and an additional 10.8% attend services 1-3 times per month. Of the remaining 36% of participants, 22.8% attend "every month or so" to "1-2 times per year" and 13.2% never attend religious services. Many participants are also involved in other activities besides attending services at their place of worship, with 29.9% reporting other religious participation (e.g., Bible study) once or more each week and another 19.8% involved 1-3 times per month. Together, this was 49.7% of the sample who participate in non-service activities at their place of worship at least once each month. About a quarter of the participants (24%) participate in these other activities "every month or so" or "1-2 times per year" and 26.3% report never participating in non-service activities at their place of worship.

Means, standard deviations, and scale ranges for all predictor and outcome variables are presented in Table 4.1. Independent samples t-tests were conducted to examine if gender differences existed across the scores of the predictor and dependent

variables. No significant mean score differences existed with one exception: on average, girls experienced higher levels of depressive symptoms than did the boys (see Table 4.1).

Correlational Analyses

Zero-order correlations between all covariate, predictor, and outcome variables are presented in Table 4.2. In this sample of early adolescents, age was inversely related to adolescent connectedness to the family, youth leader, and the two delinquent behavior outcomes. Older adolescents reported less connectedness to the family and youth leader and more delinquent behaviors than did younger adolescents. With respect to gender (coded 0=girl, 1=boy), only the relationship with depressive symptoms was significant. This is consistent with the t-test results that girls reported more depressive symptoms than did boys.

All relationships among the predictor variables (i.e., family, school, youth leader, congregation member, and spiritual connectedness) were significant and positive such that higher levels of connectedness in one context was significantly correlated with higher levels of connection in any other context. With the exception of two relationships (youth leader connectedness and less serious delinquent behaviors, and congregation member connectedness and less serious delinquent behaviors), relationships between the predictor variables and the three outcome variables (i.e., depressive symptoms, less serious and more serious delinquent behaviors) were negative and significant, where the more connected an adolescent was to any of the contexts, the less likely he was to report delinquent behavior or depressive symptoms. Lastly, all outcome variables were

positively and significantly associated with one another such that higher levels of one variable were associated with higher levels of the other two.

Testing Study Hypotheses

A series of hierarchical regression analyses were used to test all study hypotheses. Each model was run three times, once for each outcome variable (less serious delinquent behaviors, more serious delinquent behaviors, depressive symptoms).

Hypothesis 1

To test hypothesis 1, that each predictor variable would be associated with each outcome even after age and gender were controlled, a series of 2-step regression analyses were conducted. Gender and age were entered in step 1, followed by each predictor variable (family connectedness, school connectedness, youth leader connectedness, congregation member connectedness, spiritual connectedness) independently entered into step 2. That is, a separate model was run for each variable. Results from these analyses are presented in Table 4.3.

As expected, even after controlling for gender and age, family and school connectedness were both significantly related to early adolescent less serious delinquent behaviors, more serious delinquent behaviors and depressive symptoms. Higher levels of adolescent feeling of connectedness to the family and school were related to lower levels of each of the outcomes. The two congregational connectedness variables (i.e., youth leader connectedness and congregation members connectedness) were significantly and negatively related to more serious delinquent behaviors and depressive symptoms, but were not related to early adolescent engagement in less serious delinquent behaviors.

Spiritual connectedness, however, was significantly related to all three outcomes. More connectedness to the youth leader or members of the congregation was associated with fewer serious delinquent behaviors and depressive symptoms. Greater levels of spiritual connectedness were related to lower levels of all three early adolescent problems.

Hypothesis 2

Hypothesis 2 predicted each religious connectedness variable would account for a unique proportion of the variance in each outcome over and above that accounted for by family and school connectedness. To test hypothesis 2, a series of 3-step hierarchical regression analyses were used. Models were set up such that the gender and age covariates were entered into step 1, family connectedness and school connectedness were entered into step 2, and step 3 included the religious context variable. The model was run separately for youth leader connectedness, congregation member connectedness, and spiritual connectedness. Results are presented in Table 4.4.

Early adolescent feeling of connectedness to their youth leader made a significant and unique contribution to adolescent engagement in more serious delinquent behaviors, accounting for 3.4% [$F(1,161)=7.00, p<.01$] of the variance. This contribution of youth leader connectedness was above and beyond that of the significant contributions of family connectedness and adolescent age. The total model accounted for 21.2% of the outcome variance [$F(5,161)=8.65, p<.001$]. Youth leader connectedness did not make a significant contribution to either adolescent less serious delinquent behaviors [R^2 for the total model =.17, $F(5,161)=6.62, p<.001$] or depressive symptoms [R^2 for the total model

=.30, $F(5,161)=4.02$, $p<.001$] beyond that of the family and school contexts and demographic variables.

Connectedness to members of the congregation uniquely and significantly contributed 1.7% [$F(1,161)=4.09$, $p<.05$] to the variance in early adolescent depressive symptoms beyond that of gender, family and school connectedness. The resulting total model accounted for 31.3% of the outcome variance [$F(5,161)=14.68$, $p<.001$]. Likewise, congregation member connectedness was approaching significance in its contribution to more serious delinquent behaviors, accounting for an additional 1.7% [$F(1,161)=3.47$, $p=.06$] of the outcome variance beyond that accounted for by family connectedness. This resulted in a full model contribution of 19.5% of the variance in the outcome [$F(5,161)=7.79$, $p<.001$]. Congregation member connectedness did not significantly and uniquely contribute to the variance of adolescent less serious delinquent behaviors [R^2 for the total model =.17, $F(5,161)=6.61$, $p<.001$].

Spiritual connectedness made a significant and unique contribution to early adolescent engagement in more serious delinquent behaviors and experience of depressive symptoms, contributing 3.4% [$F(1,161)=7.15$, $p<.01$] and 4.5% [$F(1,161)=10.99$, $p<.001$] to the variances, respectively. The contribution to more serious delinquent behaviors was above and beyond the significant contributions of adolescent age and family connectedness, resulting in a full model contribution of 21.2% [$F(5,161)=8.69$, $p<.001$] of the variance. The contribution of spiritual connectedness to early adolescent depressive symptoms was above and beyond that accounted for by gender, family and school connectedness, bringing the total model contribution to

depressive symptoms to 34.1% [$F(5,161)=16.64, p<.001$] of the variance. Spiritual connectedness did not make a significant contribution to less serious delinquent behaviors [R^2 for the total model =.18, $F(5,161)=7.13, p<.001$].

In summation, not one of the religious connectedness variables made a significant unique contribution to early adolescent participation in less serious delinquent behaviors beyond that accounted for by family connectedness, school connectedness, and covariates. Youth leader and spiritual connectedness both made unique and significant contributions to the occurrence of early adolescent more serious delinquent behaviors and although it was not significant, congregation member connectedness was approaching significance in its contribution to more serious delinquent behavior. Two of the religious connectedness variables, congregation member connectedness and spiritual connectedness, accounted for a significant portion of the variance of depressive symptoms above and beyond that by family and school connectedness and the demographic variables.

Hypothesis 3

A series of hierarchical regression analyses was also used to examine hypothesis 3 and determine if religious connectedness moderated, or buffered, the negative contribution of family connectedness and school connectedness to each dependent variable. To begin, interactive terms using centered predictor variables were calculated between (1) youth leader connectedness and family connectedness, (2) youth leader connectedness and school connectedness, (3) congregation member connectedness and family connectedness, (4) congregation member connectedness and school

connectedness, (5) spiritual connectedness and family connectedness, and (6) spiritual connectedness and school connectedness. The predictor variables in the interaction terms were centered to avoid possible multicollinearity (Aiken & West, 1991). Separate models were examined for each 2-way interaction and all lower-level main effects were included. In step 1 of the models, the covariates gender and age were entered. Step 2 included family connectedness, school connectedness, and the respective religious connectedness variable that was included in the 2-way interaction. Step 3 included the 2-way interaction term to be tested. Interactions significant at the 95% level ($p < .05$) were probed by exploring the effect of family or school connectedness on the dependent variable at both high [1 standard deviation (*SD*) above the mean] and low (1 *SD* below the mean) levels of each religious connectedness variable (Aiken & West, 1991).

As shown in Table 4.5, all three religious connectedness variables significantly interacted with family connectedness as related to early adolescent more serious delinquent behaviors. The family connectedness X youth leader connectedness interaction accounted for 4.4% [$F(1,160)=9.46, p < .01$] of the variance in early adolescent more serious delinquent behaviors. Family connectedness X congregation member connectedness contributed 2.6% [$F(1,160)=5.46, p < .05$] to the variance. Furthermore, family connectedness X spiritual connectedness accounted for 3.8% [$F(1,160)=7.90, p < .01$] of the more serious delinquent behavior variance. Family connectedness did not significantly interact with any religious variable in relation to early adolescent less serious delinquent behaviors or depressive symptoms.

Probing the significant interaction between family connectedness and youth leader connectedness on early adolescent more serious delinquent behaviors showed that at higher levels of youth leader connectedness, the relationship between family connectedness and the outcome was not significant ($\beta = -.08$). At lower levels of youth leader connectedness, however, the relationship between family connectedness and more serious delinquent behaviors was negative and significant ($\beta = -.48, p < .001$). As shown in Figure 4.1, the results indicated that higher levels of youth leader connectedness buffered the relationship between low levels of family connectedness and more serious delinquent behaviors. That is, higher levels of youth leader connectedness protected the adolescents low in family connectedness from engaging in more serious delinquent behaviors. This same buffering relationship was found with congregation member connectedness and spiritual connectedness such that at higher levels of congregational member connectedness and spiritual connectedness, the effect of family connectedness on more serious delinquent behaviors was not significant ($\beta = -.14$ and $\beta = -.12$, respectively). The relationship between family connectedness and the outcome was significant when adolescents reported lower levels of congregation member connectedness ($\beta = -.45, p < .001$) and spiritual connectedness ($\beta = -.51, p < .001$). Figures 4.2 and 4.3 illustrate that high levels of congregation member connectedness and spiritual connectedness each protected early adolescents with low levels of family connectedness from experiencing the adverse outcome.

Of the three interactions of school connectedness with each religious context, school connectedness significantly interacted only with spiritual connectedness as related

to less serious delinquent behaviors (see Table 6). This interaction accounted for 2.5% [$F(1,160)=5.00, p<.05$] of the variance in early adolescent less serious delinquent behavior. Probing the interaction indicated that at higher levels of spiritual connectedness, the relationship between school connectedness and less serious delinquent behaviors was significant ($\beta = -.31, p<.01$) but at lower levels of spiritual connectedness, the relationship was not significant ($\beta = -.01$). See Figure 4.4. This suggests spiritual connectedness exhibited a multiplicative effect on the relationship between low levels of school connectedness and early adolescent less serious delinquent behaviors. The lowest levels of less serious delinquent behaviors were experienced when both school connectedness and spiritual connectedness were high. No other interactions between school connectedness and the religious variables were significant for the early adolescent outcomes.

In summation, all religious variables buffered the relationship between family connectedness and early adolescent engagement in more serious delinquent behaviors. Of the three religious variables, only spiritual connectedness moderated the relationship between school connectedness and less serious delinquent behaviors, demonstrating a multiplicative effect on the relationship. Religious connectedness did not moderate the family or school effects on adolescent report of depressive symptoms.

Hypothesis 4

Hypothesis 4 stated that the relationships between each contextual variable (i.e., family, school, youth leader, congregation member, and spiritual connectedness) and each outcome variable would be stronger for girls than for boys. A series of hierarchical

regression analyses were conducted to test this hypothesis. Interactive terms were calculated using centered predictor variables and gender (coded 0=girl, 1=boy), resulting in five two-way interaction terms for each of the 3 outcomes: (1) family connectedness X gender, (2) school connectedness X gender, (3) youth leader connectedness X gender, (4) congregation member connectedness X gender, and (5) spiritual connectedness X gender. The regression models were set up with the covariates entered in step 1; family, school and the respective religious connectedness variable in step 2; and the interaction term in step 3. The relationship between each predictor variable and each outcome was then examined for boys and girls. Results showed that no significant 2-way interaction with gender existed for early adolescent more serious delinquent behaviors.

For the less serious delinquent behaviors outcome, 2 of the 5 interactions were significant (see Table 4.6). Results indicated that gender moderated the relationship between congregation member connectedness and early adolescent less serious delinquent behaviors, accounting for 2.3% [$F(1,160)=4.47, p<.05$] of the outcome variance. Probing the interaction indicated this relationship was not significant for girls ($\beta=-.11$), but that it was approaching significance for boys ($\beta=.21, p=.09$; see Figure 4.5). Not only was this relationship unexpectedly stronger for boys than for girls, but it also was in the opposite direction than expected. For boys, higher levels of congregation member connectedness related to higher levels of less serious delinquent behaviors. An additional interaction between school connectedness and gender as related to early adolescent less serious delinquent behaviors was significant, but was subsumed by a significant 3-way interaction and discussed in the following section.

With respect to the depressive symptoms outcome, 2 of the 5 interactions were significant (see Table 4.7). Gender moderated the relationship between family connectedness and depressive symptoms, accounting for 2.8% [$F(1,161)=6.82, p<.01$] of the outcome variance. Probing the interaction indicated that family connectedness was significantly and negatively related to girls' reports of depressive symptoms ($\beta = -.49, p<.001$), but not boys' ($\beta = -.12$; see Figure 4.6). Likewise, the relationship between school connectedness and early adolescent depressive symptoms was moderated by gender, whereby the interaction accounted for 3.5% [$F(1,161)=8.52, p<.01$] of the outcome variance. Probing the interaction indicated school connectedness also significantly and negatively related to girls' reports of depressive symptoms ($\beta = -.41, p<.001$), but not the boys' ($\beta = -.04$). See Figure 4.7.

In summation, family connectedness and school connectedness were significantly related to girls' reported depressive symptoms, but not boys'. Gender differences were also noted for the effect of congregation member connectedness on less serious delinquent behaviors, wherein the relationship for boys was approaching significance but no effect was noted for girls.

Hypothesis 5

As with the prior hypotheses, a series of hierarchical regression analyses were employed to test hypothesis 5, which stated the 2-way interactions between family and school connectedness and each religious connectedness variable would be moderated by gender. Specifically, girls would be more likely than boys to experience a buffering effect of religious connectedness on the relationships between family and school connectedness

and the outcome variables. Six 3-way interaction terms were created as follows: (1) family connectedness X youth leader connectedness X gender, (2) family connectedness X congregation member connectedness X gender, (3) family connectedness X spiritual connectedness X gender, (4) school connectedness X youth leader connectedness X gender, (5) school connectedness X congregation member connectedness X gender, and (6) school connectedness X spiritual connectedness X gender. Building upon the model for hypothesis 3, covariates were entered in step 1, the relevant main effect predictors in step 2, and all lower-level 2-way interactions were included in step 3. The respective 3-way interaction was entered into step 4 of the model.

One 3-way interaction between school connectedness, youth leader connectedness, and gender was significant in relation to early adolescent less serious delinquent behaviors (see Table 4.6). The 3-way interaction accounted for 4.7% [$F(1,157)=9.89, p<.01$] of the outcome variance. In order to understand the nature of these relationships, the 2-way interaction between school connectedness and youth leader connectedness was examined for girls and boys. A significant negative relationship between the two variables for less serious delinquent behaviors existed for the girls ($\beta = -.20, p<.05$), but a significant positive relationship between the two variables existed for boys ($\beta = .29, p<.05$). Figure 4.8 illustrates these relationships.

To probe the significant 2-way interactions, the effect of school connectedness on the dependent variable was examined at both high (1 *SD* above the mean) and low (1 *SD* below the mean) levels of the youth leader connectedness variable. Probing the girls' interaction indicated that at higher levels of youth leader connectedness, the relationship

between school connectedness and less serious delinquent behaviors was significant and negative ($\beta = -.52, p < .001$). At lower levels of youth leader connectedness, school connectedness was not significantly related to the outcome ($\beta = -.16$). These unexpected results suggest youth leader connectedness exacerbated the relationship between low levels of school connectedness and early adolescent girls' less serious delinquent behaviors. Thus, even at high levels of youth leader connectedness, low levels of school connectedness resulted in the highest level of less serious delinquent behaviors. Alternatively, however, results suggest that it is only in the presence of high levels of youth leader connectedness that the effects of high levels of school connectedness are associated with less serious delinquent behaviors.

Probing the boys' school connectedness X youth leader connectedness interaction indicated that at high levels of youth leader connectedness, school connectedness was not significantly related to less serious delinquent behaviors, although this positive relationship was approaching significance ($\beta = .30, p = .09$). At lower levels of youth leader connectedness, the relationship between school connectedness and the outcome was not significant ($\beta = -.22$). Also unexpected but contrary to the girls' findings, the more connected the boys were to their youth leader, the more likely they were to engage in less serious delinquent behaviors. Thus, in the presence of low levels of youth leader connectedness, school connectedness was not associated with early adolescent less serious delinquent behaviors.

CHAPTER 5 DISCUSSION

Although existing research examines the influence of adolescent feeling of connectedness to a variety of contexts including the family (Essau, 2004; Sameroff et al., 2004; Sund & Wichstrom, 2002; Laible et al., 2000; Gray & Steinberg, 1999) and school (O'Donnell et al., 2002; Crosnoe et al., 2002; Roalson & Loukas, 2004; Dornbusch et al., 2001), very little research explores adolescent connection to religion (defined in this study as connectedness to members of the congregation, youth leader, and God) and how these connections relate to early adolescent internalizing and externalizing problems. Additionally, limited research exists that demonstrates how adolescent feeling of connectedness to one context may buffer or exacerbate the effects of another context (Costa et al., 2005; Roalson & Loukas, 2004). This study was designed to both replicate the existing literature regarding the influence of the family and school contexts on early adolescent developmental outcomes and to extend the literature by examining the influence of religious connectedness and its interactive effects with the family and school contexts on the outcomes.

The overall findings provide partial support for all five hypotheses and are consistent with relationships described by both Social Control (Hirschi, 1969) and Attachment (Ainsworth, 1989) Theories. Both theories explain how adolescent relationships with significant others who support societal rules of behavior (e.g., parents, others members of their religious organization, God) influence adolescent depressive symptoms and engagement in delinquent behaviors. The more connected the adolescent feels to these significant others, the less likely the adolescent will experience problem

outcomes. The findings also extend the existing literature by showing religion is a context that not only directly contributes to the occurrence of early adolescent more serious delinquent behaviors and depressive symptoms, but also moderates the effect of family connectedness on more serious delinquent behaviors. Additionally, an unexpected relationship between school connectedness and youth leader connectedness was demonstrated that contradicts one of the study's hypotheses.

Religious Connectedness and More Serious Delinquent Behaviors

In support of hypotheses 1 and 2, all three aspects of religious connectedness were particularly salient in the occurrence of early adolescent more serious delinquent behaviors. Youth leader connectedness and spiritual connectedness each independently and uniquely contributed to lower levels of adolescent engagement in these behaviors, above and beyond that of family connectedness and adolescent age. Although independently predictive of more serious delinquent behaviors, congregation member connectedness was only marginally uniquely associated with the outcome (perhaps due to the small sample size). These contributions to the outcome were small but significant, indicating adolescent religious connectedness influenced carrying a weapon and shoplifting from a store. The more connected an adolescent feels to youth leaders and God (i.e., spiritual connectedness), the less likely he is to engage in more serious delinquent behaviors.

There are two possible explanations for these relationships between religious connectedness and more serious delinquent behaviors. First, members of a religious organization are unified by a common belief system, or moral directives, that identify

what is right and wrong, good and bad, etc. (Smith, 2003a). Within these moral directives, more serious delinquent behaviors are likely easily understood as “wrong” or “bad.” These directives lead early adolescents to avoid the behaviors (Simons et al., 2004; Johnson et al., 2001; Corwyn & Benda, 2000) and the threat of personal guilt or shame (Ellison & Levin, 1998) or supernatural punishment (Baier & Wright, 2001; Stark, 1996) that may follow. Second, if the adolescent feels strongly connected to his youth leader or God, then according to Social Control Theory (Hirschi, 1969) he is more likely to behave in such a way that is expected and supported by those entities in order to avoid the possible social sanctions (e.g., being ridiculed or ostracized) that could result (Ellison & Levin, 1988). Simply stated, the stronger the connection is between the adolescent and youth leader or God, the less likely he is to engage in these behaviors.

As expected and predicted by hypothesis 3, all three religious connectedness variables buffered the relationship between low levels of family connectedness and more serious delinquent behaviors. Strong connections to either the youth leader, other congregation members, or to God (i.e., spiritual connectedness) offset or protected early adolescents from this adverse outcome associated with low levels of family connectedness. The family is the primary developmental context and the parent-adolescent connection is a core parenting component influencing early adolescents (Barber, 1997). When this connection is low, high levels of adolescent connections to these aspects of the religious context appear to compensate for the weak family connections, providing the early adolescent with the developmental experiences necessary for positive outcomes such as not engaging in more serious delinquent

behaviors. These findings support existing research demonstrating non-familial conventional contexts that meet the adolescent's need for connection may promote positive development (Way & Robinson, 2003; Crosnoe et al., 2003; Dornbusch et al., 2001; Barber & Olsen, 1997). These findings extend Barber and Olsen's (1997) research by demonstrating a specific context compensates for insufficient developmental experiences in the family context. In fact, this is the first study to show that religious connectedness moderates poor quality family relationship effects on early adolescent delinquent behavior. These findings suggest religious connectedness provides an additional source or opportunity to have adolescent developmental needs met when the necessary connections are not provided from the family.

Religious Connectedness and Less Serious Delinquent Behaviors

Unlike the more serious delinquent behaviors, only spiritual connectedness independently predicted early adolescent less serious delinquent behaviors (hypothesis 1). Additionally, hypothesis 2 was not supported as not one of the religious connectedness variables uniquely contributed to the outcome above and beyond the family and school contexts. Research indicates that there exists a hierarchy of contextual influence on adolescent developmental outcomes such that the family and peer contexts appear to be primary over the school and neighborhood contexts. As the peer context can be "nested" within the school context (c.f., Costa et al., 2005) and this study did not control for peer connections, it is possible participants focused on relationships with their peers when responding to the school connectedness survey items. It is also possible that within the hierarchy of influence, the religious context may be secondary to the family and peer

contexts in its influence on early adolescent less serious delinquent behavior. As such, the sample size ($n=167$) of this study may be too small to detect a unique contribution of the religious variables on less serious delinquent behaviors above and beyond that of the family and school.

Despite the lack of unique effects predicted by hypothesis 2 for less serious delinquent behaviors, spiritual connectedness demonstrated a moderating relationship with school connectedness in relation to early adolescent less serious delinquent behaviors. Probing the interaction identified higher levels of spiritual connectedness had a multiplier effect on the negative relationship between school connectedness and early adolescent less serious delinquent behaviors. At higher levels of spiritual connectedness, adolescents with greater connectedness to the school experienced lower levels of less serious delinquent behaviors than adolescents low in spiritual connectedness.

Additionally, a moderating relationship predicted by hypothesis 5 was demonstrated by the 3-way interaction among school connectedness, youth leader connectedness, and gender. Interestingly, the direction of the school connectedness X youth leader connectedness interactive effect on less serious delinquent behaviors was opposite for girls and boys. The girls experienced an exacerbating effect such that higher levels of youth leader connectedness intensified the negative relationship between school connectedness and less serious delinquent behaviors. Alternatively, the boys experienced an exacerbating effect such that higher levels of youth leader connectedness intensified the positive relationship between school connectedness and less serious delinquent behaviors. At higher levels of youth leader connectedness, boys with stronger

connections to their school were more likely to engage in less serious delinquent behaviors than were boys with weaker connections to their school. These findings are inconsistent with hypothesis 5 and with the results of Roalson and Loukas (2004) who found a protective effect of school connectedness on early adolescent conduct problems.

As stated previously, school connectedness items used in this study may have been interpreted based on peer relations, which are experienced within the school setting (c.f., Costa et al., 2005). As the peer context is more influential on adolescent engagement in delinquent behavior than is the school context (Costa et al., 2005; Barber & Olsen, 1997), the nature of the peer relationship may be driving the unexpected results of the school connectedness interaction with youth leader connectedness. Further, a deviant peer group predicts adolescent involvement in delinquent behaviors (Crosnoe et al., 2002; Eccles et al., 1997; Barber & Olsen, 1997) and boys are particularly susceptible to the influence of deviant peers (Crosnoe et al., 2002; Eccles et al., 1997; Barber & Olsen, 1997). Thus, the exacerbating effect of high youth leader connectedness on the positive relationship between school connectedness and less serious delinquent behaviors was experienced by the boys and not the girls.

One other study also found an unexpected effect using the school connectedness variable that, in part, supports the conclusion that school connectedness may be a vulnerability factor for adolescents. A recent study by Prelow, Bowman, and Weaver (2007) found school connectedness exacerbated the relationship between ecological risk (a composite of socioeconomic status, stressful life events, and deviant peer group) and high school student's academic achievement. Like the Prelow et al. (2007) study, the

present study is cross-sectional in design and, therefore, is unable to determine which of the two constructs in the interaction (e.g., school connectedness or youth leader connectedness) is the vulnerability factor. Since the results of this study replicate the exacerbating results from the Prelow and colleagues (2007) study, which uses the same 5-item school connectedness measure, it is likely school connectedness is the vulnerability factor. Nonetheless, additional research is needed to further examine the effects of school connectedness on early adolescent less serious delinquent behaviors.

A further consideration regarding the unexpected effects of the 3-way interaction between school connectedness, youth leader connectedness, and gender is the instrument used in measuring youth leader connectedness. This construct was not previously established in the early adolescent literature. Due to the similarities in roles between a youth leader and teacher, the researcher modeled this 5-item measure after teacher support scales in the early adolescent school literature. As such, additional research is needed to further refine and validate the measure.

Additionally, the congregation member connectedness X gender interaction was significantly related with less serious delinquent behaviors, providing partial support for hypothesis 4. Interestingly, the relationship was approaching significance for boys (likely due to the small sample size) and was not significant for girls. The direction of this relationship for boys was also a surprise in that a stronger connection to the congregation was related with higher levels of less serious delinquent behaviors. Like the school connectedness variable, congregation member connectedness represents a group of people with whom adolescents may feel connected. It is possible that participants

responded to items regarding congregation member connectedness primarily in relation to how they feel about their peers who are part of the congregation. If the peer group engages in less serious delinquent behavior, then the adolescent is likely to engage in the behaviors as well. Further research is needed, particularly longitudinal studies, to further explore the influential mechanisms of school connectedness and congregation member connectedness on early adolescent less serious delinquent behaviors.

Religious Connectedness and Depressive Symptoms

As predicted by hypothesis 1, all three religious connectedness variables independently contributed to lower levels of early adolescent depressive symptoms. In support of hypothesis 2, congregation member connectedness and spiritual connectedness both provided a significant unique contribution to the occurrence of early adolescent depressive symptoms. This supports existing research demonstrating interpersonal religious experiences, defined by anticipated support from and negative interactions within the congregation, make a unique contribution to the occurrence of early adolescent depressive symptoms (Pearce et al., 2003). Although youth leader connectedness uniquely contributed to the occurrence of more serious delinquent behaviors, likely due to the religious organization's moral directives as previously discussed, it did not uniquely contribute to early adolescent less serious delinquent behaviors or depressive symptoms. Again, the lack of findings regarding youth leader connectedness may be due to the measurement instrument as previously discussed.

Another surprising finding was that in contrast to hypothesis 4, the religious variables were equally predictive of girls' and boys' depressive symptoms, even though

gender differences existed for the family and school effects (family and school connectedness contributed to higher levels of depressive symptoms for girls but not boys). This is interesting because consistent with the existing literature, girls in this sample experienced significantly higher levels of depressive symptoms than did the boys (Galambos et al., 2004; Saluja et al., 2004; Sund & Wichstrom, 2002; Leadbeater et al., 1999). Additionally, research suggests that girls are more vulnerable to adverse outcomes when valued relationships are poor (Crosnoe et al., 2002; Leadbeater et al., 1999). Thus, it follows that interpersonal relationships within the religious organization would be more influential in girls' experience of depressive symptoms than the boys'. Although unexpected, these findings are similar to those of Pearce and colleagues (2003). In their study, Pearce et al. found higher levels of adolescent perceived positive support from their religious congregation were related to lower levels of depressive symptoms, but this relationship did not vary by gender. Both girls and boys benefited equally from the positive religious relationships.

Limitations of the Current Study

Several limitations exist in the present study. To begin, this study recruited students from one middle school which produced a convenience sample, which will not enable the results to be generalized to the early adolescent population across Texas or beyond. Students across all grades in the school were invited to participate, but only those students who returned signed consent forms from their parents were allowed to take the survey. Thus, many students may not have taken the form home for their parents to consider granting permission and may have biased the sample (i.e., students with greater

levels of internalizing and externalizing problems may not have taken the form home). Additionally, this study was cross-sectional in design and, therefore, unable to identify causal relationships between each of the connectedness variables and the outcomes. However, this is the first study to demonstrate that religious connectedness uniquely contributes to early adolescent delinquent behaviors and depressive symptoms, laying the foundation for future longitudinal studies.

Another limitation arose from the instrumentation and measurement methodology. All variables in this study were measured by adolescent self-report. The delinquent behavior outcome variables, however, are limited by the sole-perspective of the adolescent. A more complete understanding of these behaviors would be provided if the data were triangulated with data collected from parents and/or teachers or others at the school or religious organization. Additionally, the scales measuring delinquent behaviors may reflect recall bias by the participants, as these scales asked adolescents to report the frequency of the behaviors over the previous six months prior to completing the survey. It should also be noted that the range of reported more serious delinquent behaviors was limited such that this sample overall experienced low levels of this outcome. With a scale ranging from 0 to 4, the girls reported a mean score of .35 ($SD=.93$) and the boys' reported a mean score of .31 ($SD=.66$).

Lastly, the sample size of this study was small. Although this study met the minimum sample size necessary to detect an effect as identified by a power analysis, this minimum is an estimation that may be low. A power analysis assumes there is no measurement error in the predictor variables (Aiken & West, 1991). Minimum sample

size necessary, particularly for testing interactions, will increase substantially as the measurement reliability decreases. For example, when the reliability drops from 100% to 80%, the minimum sample size necessary to detect a 2-way interaction will likely double in order to establish a power of .80 at $\alpha=.05$ (Aiken & West, 1991). As the measures in this study do not meet the assumption of no measurement error, the power analysis may have underestimated the sample size necessary to detect all possible relationships.

Implications for Health Education

Due to the high level of early adolescent involvement in religious services and activities, religious organizations may be a particularly good point of intervention for this population. When a religious organization values the purpose of a health education program, the organization is more likely to adopt and promote the program. Adolescents within the religious group may be particularly receptive to programs supported and disseminated through the organization. The more committed and connected the adolescent is with the religious organization, the more likely he identifies with them, cares about their expectations and will respond accordingly (c.f., Hirschi, 1969). Thus, programs supported by and delivered through religious organizations may be particularly potent for early adolescents within the religious group. Additionally, religious organizations often encourage participation in service work. As such, these same adolescents may be trained as peer educators to reach other adolescents in the neighborhood communities who are not connected to or involved with a religious organization.

Conclusions and Future Directions of the Present Study

This study examining the relationships of religious connectedness with family and school connectedness and early adolescent developmental outcomes produced several interesting results. First, youth leader connectedness and spiritual connectedness each uniquely contributed to the occurrence of early adolescent more serious delinquent behavior. Congregation member connectedness and spiritual connectedness each uniquely contributed to early adolescent depressive symptoms. These contributions were above and beyond that accounted for by family connectedness.

Second, all three religious connectedness variables demonstrated a protective effect in the relationship between family connectedness and early adolescent engagement in more serious delinquent behaviors. These results suggest religious connectedness may protect those early adolescents at risk of engaging in more serious delinquent behaviors due to a lack of or low levels of connectedness with their family. In other words, high levels of religious connectedness compensated for low adolescent feeling of connectedness to the family as related to serious delinquent behavior. These results advance the literature by demonstrating (1) the relationship of one context buffering the effect of another context on adverse early adolescent outcomes, and (2) the importance of adolescent feeling of connectedness to the religious context in protecting adolescents from experiencing adverse behavior.

Third, an unexpected exacerbating relationship was demonstrated between school connectedness and spiritual connectedness as well as with youth leader connectedness. Due to the cross-sectional design of this study, it is unclear which of the two contextual

variables in this relationship is a vulnerability, or risk-intensifying, factor for the early adolescents. As similar results regarding school connectedness and adolescent outcomes are noted in the literature (Prelow et al., 2007), further research is needed to examine if school connectedness is a vulnerability factor for this population.

Future research is also needed to further explore the unique and moderating relationships between religious connectedness and early adolescent outcomes. Longitudinal studies in particular will be advantageous in replicating the above findings and examining the predictive nature of religious connectedness on future outcomes. Variation in these relationships by type of religion, race and ethnicity should be explored. Studies should consider adolescent connection to peers and how it interacts with family, school, and religious connectedness. Attention should also be given to potential mediator effects in the relationships between early adolescent connectedness to the family, school, and religious contexts on developmental outcomes. For example, research should examine if adolescent commitment to religious beliefs mediates the relationship between family connectedness and delinquent behavior. Lastly, the youth leader connectedness scale needs to be refined and validated in the early adolescent population.

Table 4.1.

Descriptive Summary of Predictor and Outcome Variable Means, Standard Deviations, and Independent Samples Test for Gender Differences (n=167).

Variable	Scale Range	Range	Girls (n=97)		Boys (n=70)		^a <i>t</i>
			<i>m</i>	<i>sd</i>	<i>m</i>	<i>sd</i>	
Family Connectedness	-2 – 4	-1.18 – 4	2.10	1.27	2.38	1.05	-1.56
Trust	0 – 2	.20 – 2	1.50	.44	1.62	.38	
Communication	0 – 2	0 – 2	1.34	.42	1.40	.41	
Alienation	0 – 2	0 – 2	.74	.51	.64	.39	
School Connectedness	0 – 4	0 – 4	2.45	.91	2.40	1.03	.28
Religious Connectedness							
Youth Leader	0 – 3	0 – 3	1.96	.85	1.89	.78	.55
Members	0 – 3	0 – 3	2.00	.86	1.93	.77	.59
Spiritual	0 – 3	.33 – 3	2.10	.57	1.95	.51	1.69
Depressive Symptoms	0 – 3	0 – 2.85	1.26	.69	.99	.52	2.89**
Delinquent Behavior							
Less Serious Beh.	0-4	0-4	.99	1.01	.95	.92	.22
More Serious Beh.	0-4	0-4	.35	.93	.31	.66	.24

Note: Family Connectedness score is calculated by adding the Trust and Communication subscales and then subtracting the Alienation subscale.

^a Degrees of freedom range from 161.87 – 165.

***p* < .01.

Table 4.2.

Zero-Order Correlations Among Covariates, Predictor, and Outcome Variables (N=167).

	1	2	3	4	5	6	7	8	9	10
1. Age in Years	-	.07	-.20*	-.09	-.17*	-.14	.01	.06	.18*	.21**
2. Gender (0=girl, 1=boy)		-	.12	-.02	-.04	-.05	-.13	-.21**	-.02	-.02
3. Family Conn.			-	.34**	.20**	.26**	.23**	-.47**	-.37**	-.39**
4. School Conn.				-	.21**	.27**	.18*	-.36**	-.27**	-.20*
5. Youth Leader Conn.					-	.77**	.38**	-.18*	-.13	-.29**
6. Member Conn.						-	.41**	-.27**	-.13	-.25**
7. Spiritual Conn.							-	-.31**	-.20*	-.27**
8. Depressive Symptoms								-	.34**	.29**
9. Less Serious Del. Beh.									-	.52**
10. More Serious Del. Beh.										-

* p<.05. ** p<.01.

Table 4.3.

Direct Effects of Family, School, and Religious Connectedness on Early Adolescent Delinquent Behaviors and Depressive Symptoms (n=167).

	Standardized Beta Coefficients					
	Less Serious Delinquent Behaviors		More Serious Delinquent Behaviors		Depressive Symptoms	
	Step 1	Step 2 ^a	Step 1	Step 2 ^a	Step 1	Step 2 ^a
Age in Years	.18*		.22**		.07	
Gender (0=girl, 1=boy)	-.03		-.03		-.22**	
Family Connectedness		-.35***		-.37***		-.46***
School Connectedness		-.26***		-.18*		-.36***
Congregational Conn.						
Youth Leader		-.10		-.26***		-.18*
Members		-.10		-.23**		-.28***
Spiritual Connectedness		-.21**		-.28***		-.34***

^a Because each context variable was included in the model independently in step 2 (5 models were run for each outcome), the betas for age and gender are not presented.

* $p < .05$. ** $p < .01$. *** $p < .001$.

Table 4.4.

Hierarchical Regression Analyses of Family, School, and Religious Connectedness on Early Adolescent Outcomes (n=167).

	Youth Leader Connectedness Model		
	Less Serious Delinquent Beh.	More Serious Delinquent Beh.	Depressive Symptoms
Step 1			
Age in Years	.18*	.22**	.07
Gender (0=girl, 1=boy)	-.03	-.03	-.22**
Step 2			
Age	.11	.14	-.03
Gender	.01	.01	-.17**
Family Conn.	-.29***	-.34***	-.38***
School Conn.	-.16*	-.07	-.24***
Step 3			
Age	.10	.11	-.04
Gender	.01	.00	-.17**
Family Conn.	-.29***	-.32***	-.37***
School Conn.	-.16*	-.04	-.23**
Youth Leader Conn.	-.02	-.19**	-.07
	Congregation Member Connectedness Model		
	Less Serious Delinquent Beh.	More Serious Delinquent Beh.	Depressive Symptoms
^a Step 3			
Age in Years	.11	.13	-.04
Gender (0=girl, 1=boy)	.01	.00	-.18**
Family Conn.	-.30***	-.32***	-.35***
School Conn.	-.16*	-.04	-.21**
Member Conn.	.01	-.14+	-.14*
	Spiritual Connectedness Model		
	Less Serious Delinquent Beh.	More Serious Delinquent Beh.	Depressive Symptoms
^a Step 3			
Age in Years	.11	.15*	-.01
Gender (0=girl, 1=boy)	-.01	-.02	-.21**
Family Conn.	-.27***	-.30***	-.33***
School Conn.	-.15*	-.05	-.21**
Spiritual Conn.	-.11	-.20**	-.22***

Note: All values are standardized beta coefficients.

^aSteps 1 & 2 yield same results as Youth Leader Model, so are not included.

+ p =.06. * p <.05. ** p <.01. *** p <.001.

Table 4.5.

Effects of Family, School, and Religious Connectedness on Early Adolescent More Serious Delinquent Behaviors (n=167).

	Standardized Beta Coefficients			
	Step 1	Step 2	Step 3	Step 4
Age in Years	.22**	.11		
Gender (0=girl, 1=boy)	-.03	.00		
Family Connectedness		-.32***		
School Connectedness		-.04		
Congregational Conn.				
Youth Leader		-.19**		
Members		-.14 +		
Spiritual Connectedness		-.20 **		
Family Conn. X				
Youth Leader			.22**	
Members			.17*	
Spiritual Conn.			.20**	
School Conn. X				
Youth Leader			.01	
Members			.09	
Spiritual Conn.			-.07	
Gender X				
Family Conn.			-.06	
School Conn.			.04	
Youth Leader			.00	
Members			-.02	
Spiritual Conn.			.07	
Family X				
Youth Leader X Gender				-.03
Members X Gender				.05
Spiritual X Gender				-.15
School X				
Youth Leader X Gender				-.02
Members X Gender				-.12
Spiritual X Gender				-.04

Note: Each 2-way interaction entered into the model separately. All 3-way interactions examined in the presence of the lower-level 2-way interactions and main effects.

+ $p=.06$. * $p<.05$. ** $p<.01$. *** $p<.001$.

Table 4.6.

Effects of Family, School, and Religious Connectedness on Early Adolescent Less Serious Delinquent Behaviors (n=167).

	Standardized Beta Coefficients			
	Step 1	Step 2	Step 3	Step 4
Age in Years	.18*	.11		
Gender (0=girl, 1=boy)	-.03	.01		
Family Connectedness		-.29***		
School Connectedness		-.16*		
Congregational Conn.				
Youth Leader		-.02		
Members		.01		
Spiritual Connectedness		-.11		
Family Conn. X				
Youth Leader			.11	
Members			-.01	
Spiritual Conn.			.05	
School Conn. X				
Youth Leader			-.03	
Members			.04	
Spiritual Conn.			-.16*	
Gender X				
Family Conn.			.07	
School Conn.			.22*	
Youth Leader			.09	
Members			.19*	
Spiritual Conn.			.06	
Family X				
Youth Leader X Gender				.07
Members X Gender				.07
Spiritual X Gender				-.02
School X				
Youth Leader X Gender				.28**
Members X Gender				.16
Spiritual X Gender				.03

Note: Each 2-way interaction entered into the model separately. All 3-way interactions examined in the presence of the lower-level 2-way interactions and main effects.

* $p < .05$. ** $p < .01$. *** $p < .001$.

Table 4.7.

Effects of Family, School, and Religious Connectedness on Early Adolescent Depressive Symptoms (n=167).

	Standardized Beta Coefficients			
	Step 1	Step 2	Step 3	Step 4
Age in Years	.07	-.04		
Gender (0=girl, 1=boy)	-.22**	-.17**		
Family Connectedness		-.37***		
School Connectedness		-.23**		
Congregational Conn.				
Youth Leader		-.07		
Members		-.14 *		
Spiritual Connectedness		-.22 ***		
Family Conn. X				
Youth Leader			.07	
Members			-.03	
Spiritual Conn.			-.09	
School Conn. X				
Youth Leader			-.04	
Members			-.02	
Spiritual Conn.			-.10	
Gender X				
Family Conn.			.21**	
School Conn.			.26**	
Youth Leader			.05	
Members			.10	
Spiritual Conn.			.14	
Family X				
Youth Leader X Gender				.05
Members X Gender				-.08
Spiritual X Gender				-.04
School X				
Youth Leader X Gender				-.01
Members X Gender				-.03
Spiritual X Gender				-.15

Note: Each 2-way interaction entered into the model separately. All 3-way interactions examined in the presence of the lower-level 2-way interactions and main effects.

* $p < .05$. ** $p < .01$. *** $p < .001$.

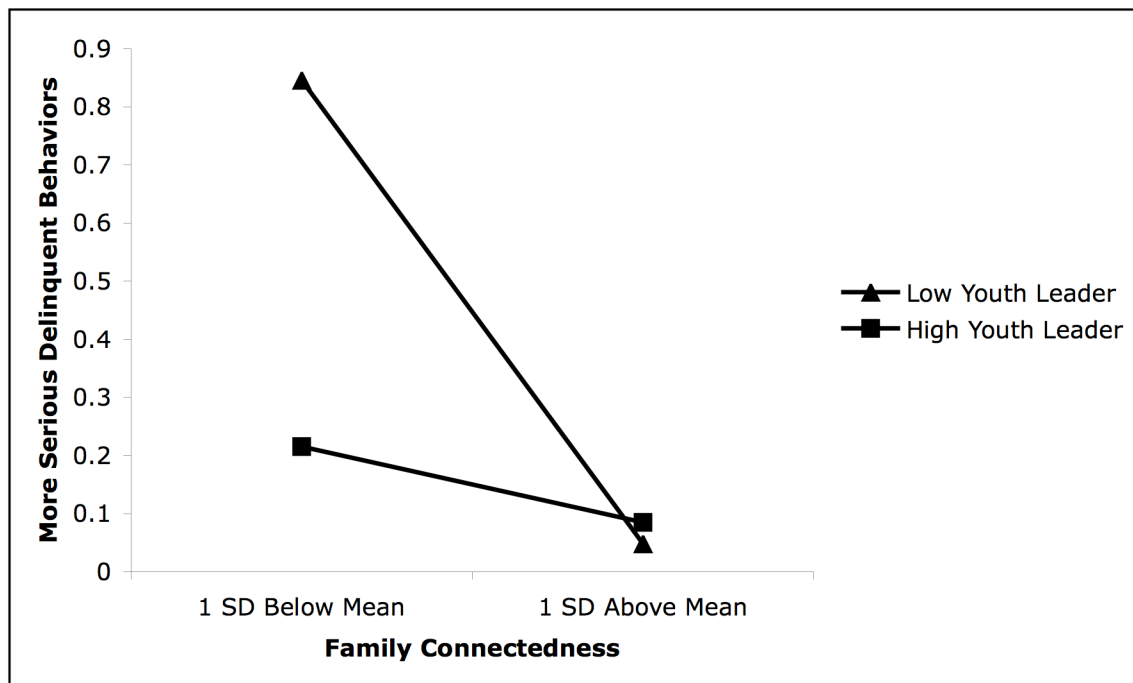


Figure 4.1. Examining the family connectedness X youth leader connectedness interaction in relation to early adolescent more serious delinquent behaviors.

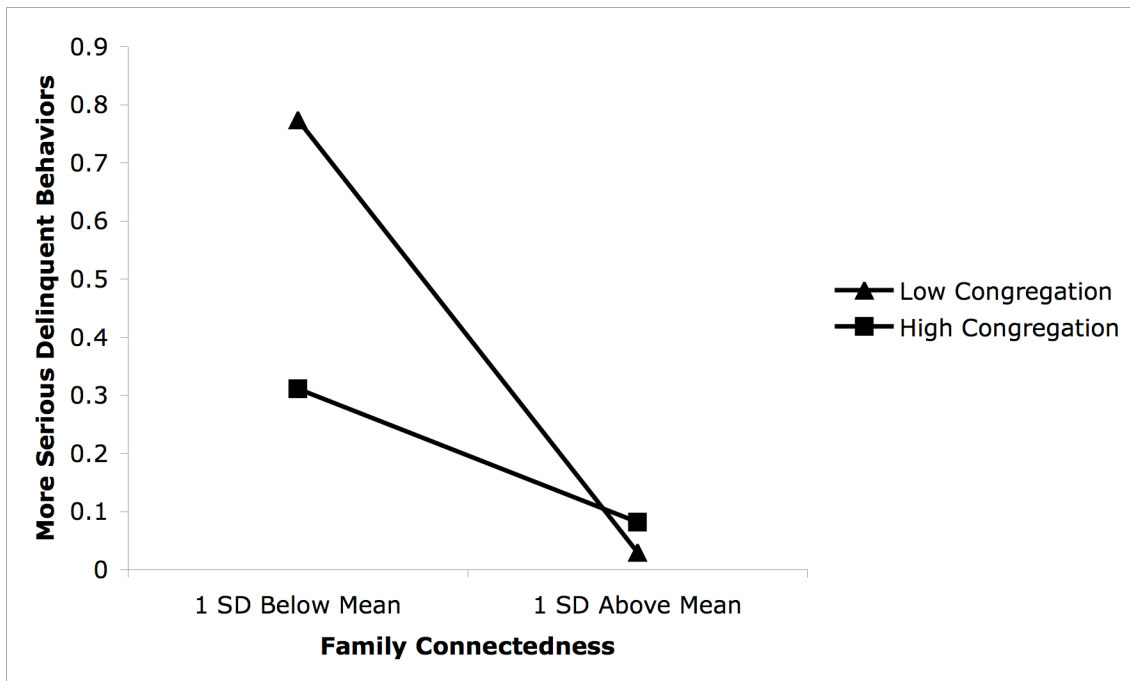


Figure 4.2. Examining the family connectedness X congregation member connectedness interaction in relation to early adolescent more serious delinquent behavior.

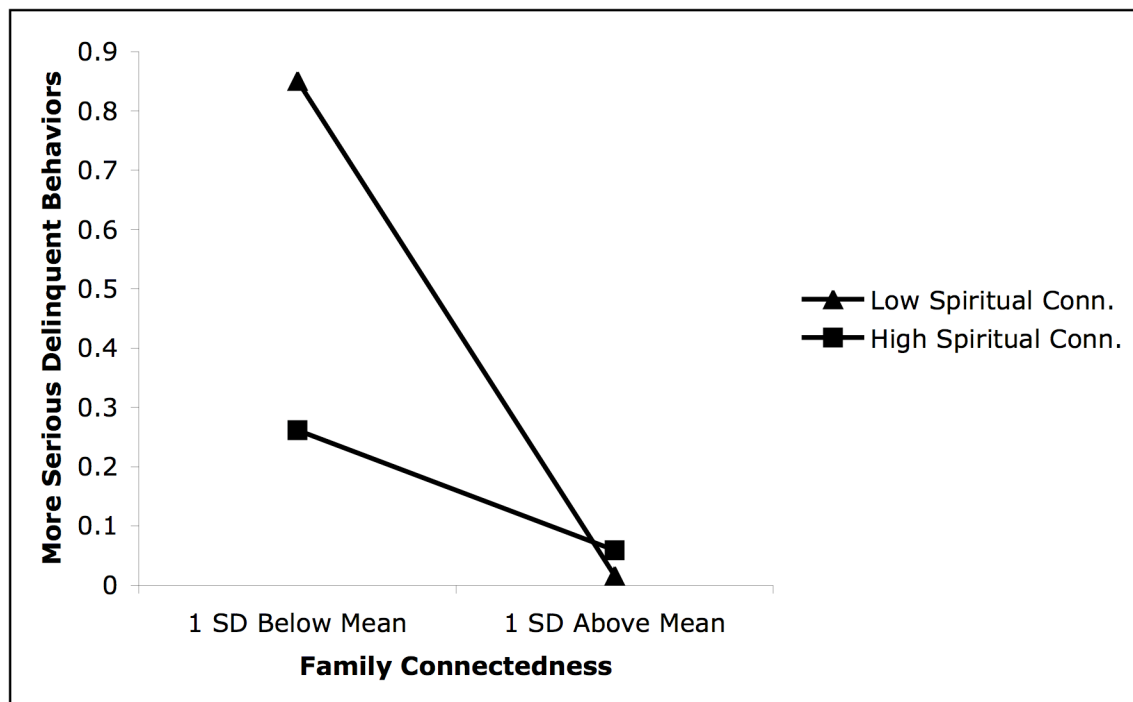


Figure 4.3. Examining the family connectedness X spiritual connectedness interaction in relation to early adolescent more serious delinquent behaviors.

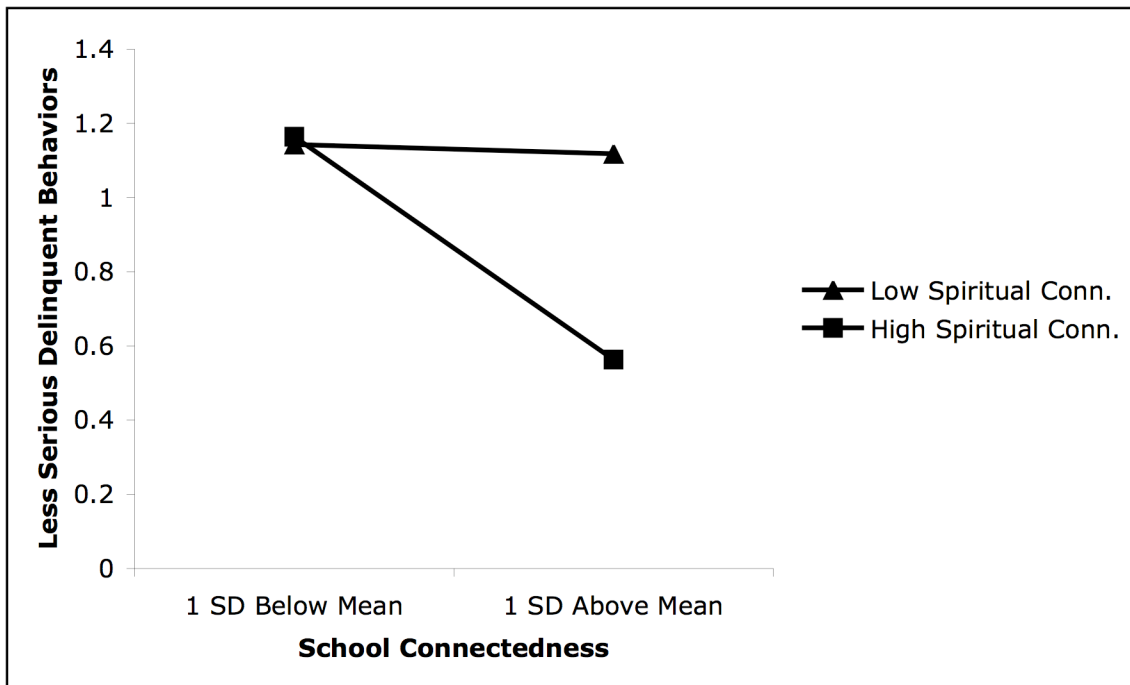


Figure 4.4. Examining the school connectedness X spiritual connectedness interaction in relation to early adolescent less serious delinquent behaviors.

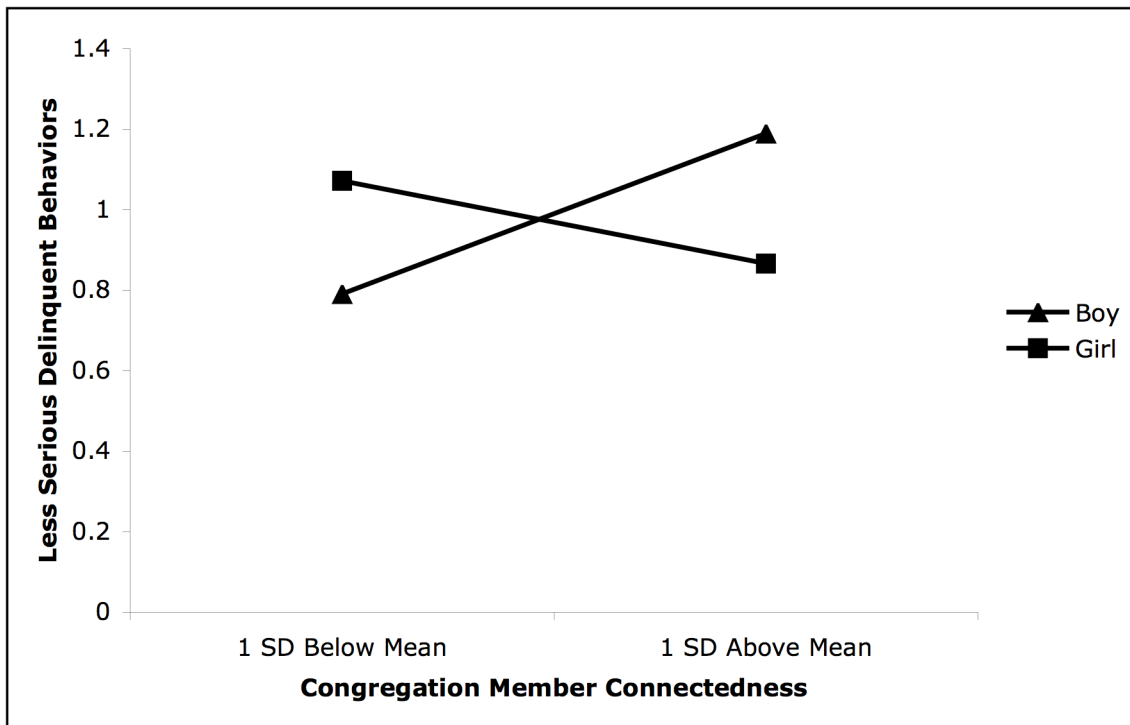


Figure 4.5. Examining the congregation member connectedness X gender interaction in relation to early adolescent less serious delinquent behaviors.

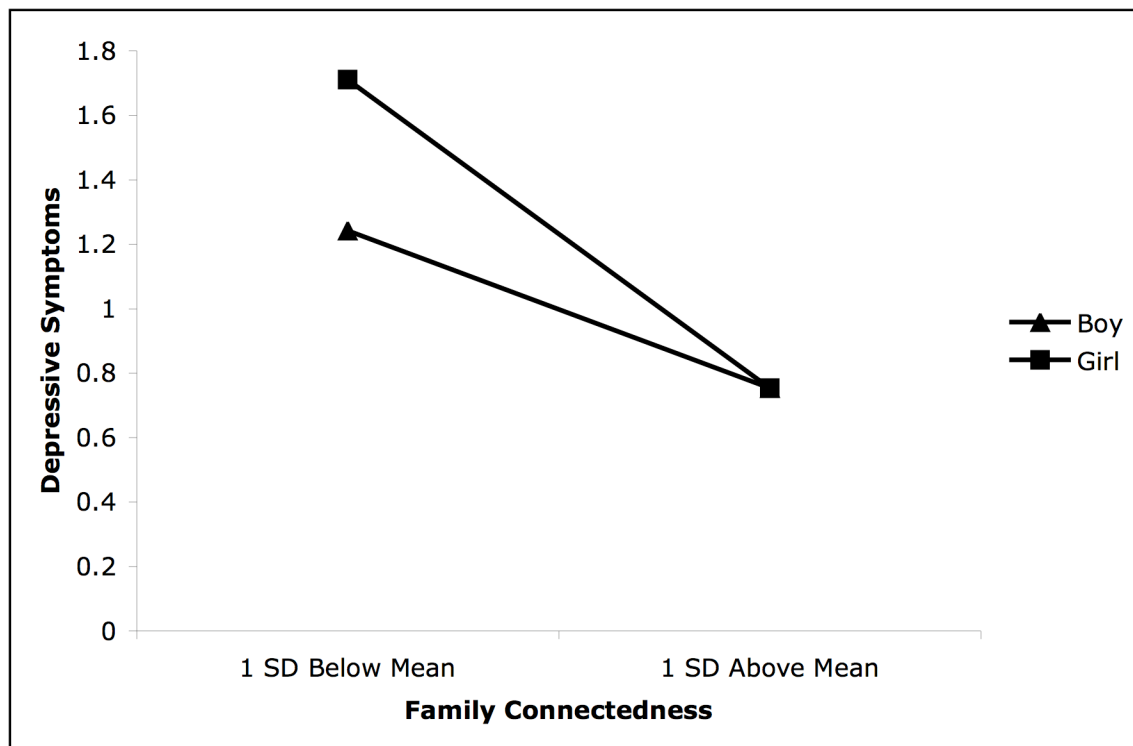


Figure 4.6. Examining the family connectedness X gender interaction in relation to early adolescent depressive symptoms.

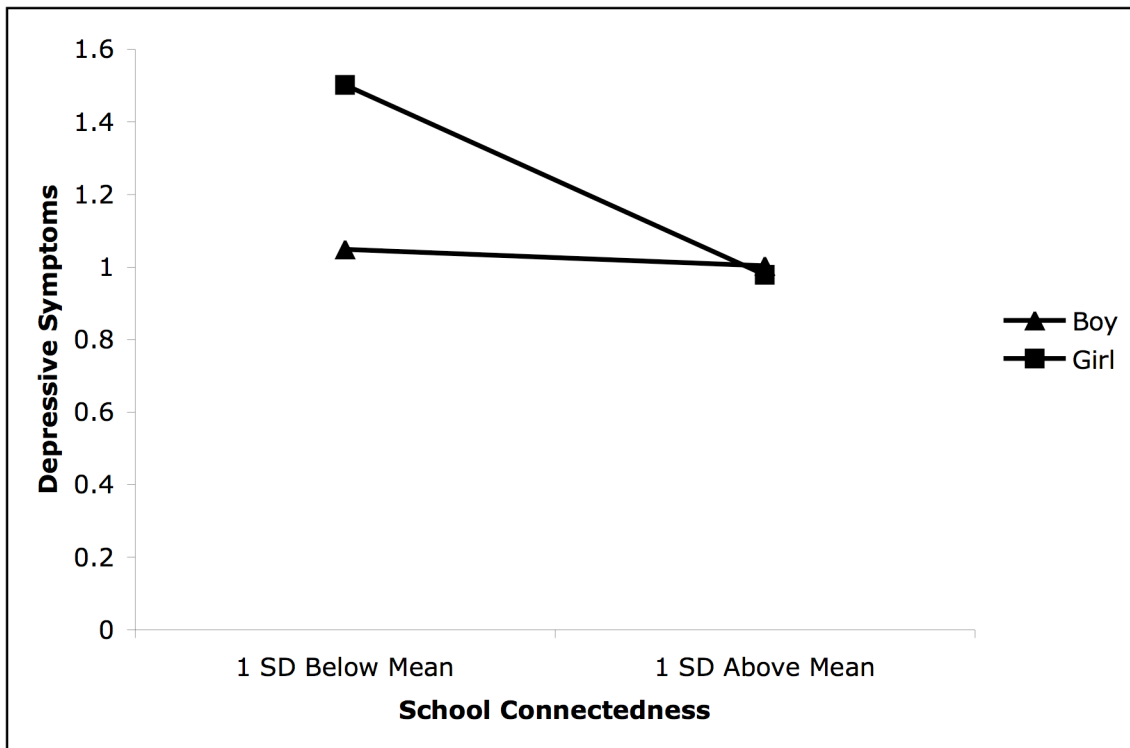


Figure 4.7. Examining the school connectedness X gender interaction in relation to early adolescent depressive symptoms.

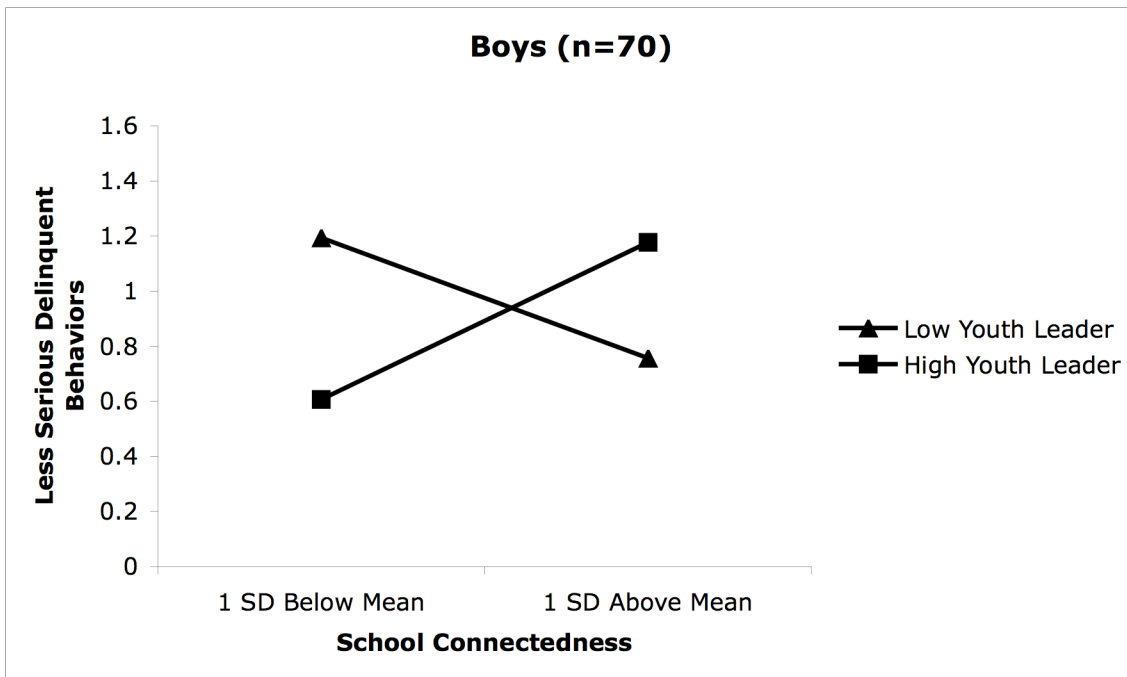
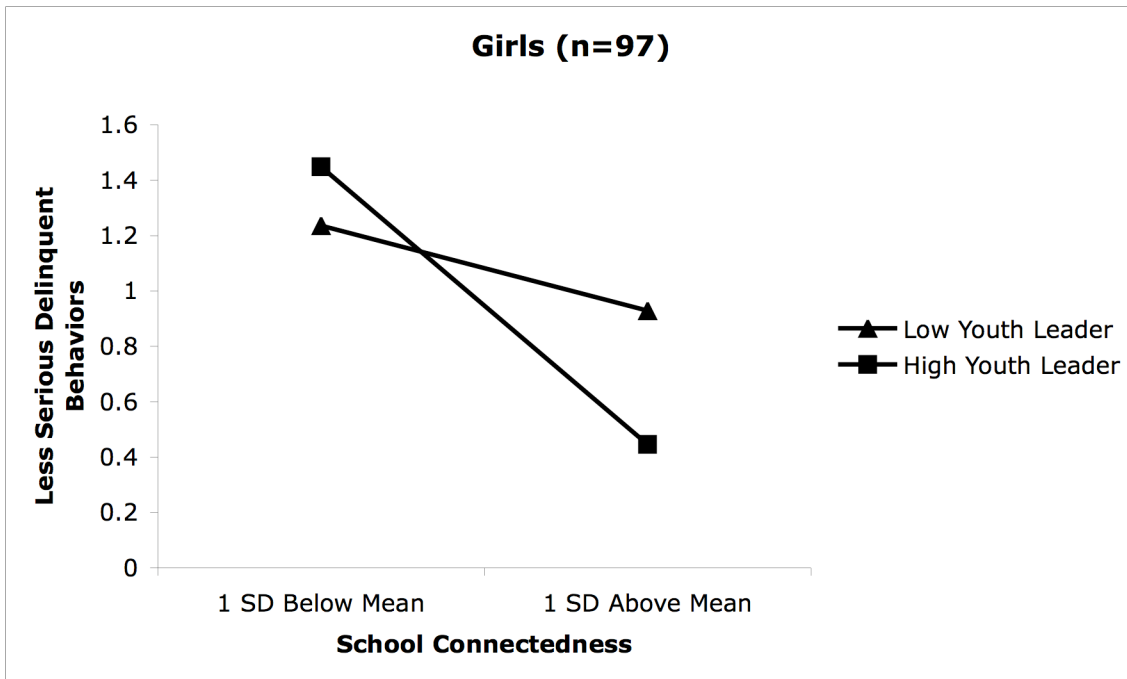


Figure 4.8. Examining the school connectedness X youth leader connectedness X gender interaction in relation to early adolescent less serious delinquent behaviors.

Informed Parental Consent to Participate in Research
The University of Texas at Austin

Your child is being asked to participate in a research study. This form provides you with information about the study. The Principal Investigator, Lori Roalson, will provide you with a copy of this form to keep for your reference and will also describe this study to your child and answer all of his/her questions. Please read the information below and ask questions about anything you don't understand before deciding whether or not your child will take part. Your child's participation is entirely voluntary and you can deny his/her participation without penalty or loss of benefits to which you are otherwise entitled.

Title of Research Study: Healthy Connections

Principal Investigator: Lori Roalson, M.Ed., Doctoral Candidate

Phone number: (512) 232-6017

Faculty sponsor: Alexandra Loukas, Ph.D.

The purpose of this study is to examine middle school age children's relationships with their school, religious organization (if applicable), and family and how these relationships correspond with the children's well-being.

If you agree to be in this study, we will ask your child to do the following things:

- Complete a 130-item questionnaire

Total estimated time to participate in the study is 30 minutes.

Risks of being in the study

- No greater than everyday life, but your child may feel uncomfortable answering some of the questions.
- This survey may involve risks that are currently unforeseeable. If you wish to discuss the information above or any other risks your child may experience, you may ask questions now or call the Principal Investigator listed on the front page of this form.

Benefits of being in the study

- There is no direct benefit to your child by participating in this study. Your child's school, however, will receive information regarding the results of this study for use in improving the quality of your child's school experience. As the survey will be anonymous, your child's school will not have access to identifying information regarding your child.

Compensation:

- All children who return this signed consent form, regardless of your permission to participate or not, will receive a coupon redeemable for an ice cream from the school's cafeteria.
- Please indicate at the end of this form whether or not you will allow your child to participate in the study.

Confidentiality and Privacy Protections:

- No information that will specifically identify your child will be asked. All information gathered is anonymous.
- Any reports that result from this project will use information that has been aggregated or averaged across all those who participate.
- The data resulting from your participation may be made available to other researchers in the future for research purposes not detailed within this consent form. Again, the data will contain no identifying information that could associate your child with it, or with your child's participation in any study.

The **records** of this study will be stored securely and kept confidential. Authorized persons from The University of Texas at Austin and members of the Institutional Review Board have the legal right to review the research records and will protect the **confidentiality** of those records to the extent permitted by law. All publications will exclude any information that will make it possible to identify you as a subject. Throughout the study, the researcher will notify you of new information that may become available and that might affect your decision to remain in the study.

Contacts and Questions:

If you have any questions about the study please ask now. If you have questions later, want additional information, or wish to withdraw your child's participation call the researcher conducting the study. Their names, phone numbers, and email address are at the top of this page. If you have questions about your child's rights as a research participant, complaints, concerns, or questions about the research, please contact Lisa Leiden, Ph.D., Chair of The University of Texas at Austin Institutional Review Board for the Protection of Human Subjects, (512) 471-8871 or email: orsc@uts.cc.utexas.edu.

You may keep the copy of this consent form.

You are making a decision about allowing your child to participate in this study. Your signature below indicates that you have read the information provided above and have decided to allow him or her to participate in the study. If you later decide that you wish to withdraw your permission for your child to participate in the study, simply tell me. You may discontinue his or her participation at any time.

My child may participate in the study.

_____ Yes _____ No

Printed Name of Youth

Signature of Parent or Legal Guardian

Date

Signature of Investigator

Date

Appendix B: Early Adolescent Assent Form

IRB #2006-05-0084

Adolescent Assent Form Healthy Connections The University of Texas at Austin

I agree to be in a study about groups with which I am involved. This study was explained to my (mother/father/parents/guardian) and (she/he/they) said that I could be in it. The study is anonymous, so no one will know what I say in the study.

In the study, I will be asked questions about how much I feel I belong and am supported in different groups. I will also be asked about the types of things I do each day and how I feel about my family and myself.

Writing my name on this page means that the page was read (by me/to me) and that I agree to be in the study. I know what will happen to me. If I decide to quit the study, all I have to do is tell the person in charge.

Adolescent's Signature

Date

Signature of Researcher

Date

Appendix C: School Commitment Letter

Judy Hundley, Principal
Bonham Middle School
4600 Midway Drive
Temple, Texas 76502

November 1, 2006

Dr. Lisa Leiden, Ph.D.
Director, Office of Research Support and Compliance
P.O. Box 7426 Campus Mail
Austin, TX 78713
Lisa.leiden@mail.utexas.edu

Dear Dr. Leiden:

The purpose of this letter is to grant Lori Roalson, a Doctoral Candidate at the University of Texas at Austin, permission to conduct research at Bonham Middle School in Temple, Texas. The project, "Healthy Connections," is designed to examine middle school age children's relationships with their family, school, and religious organization and how these relationships correspond with the children's well-being. The project entails administering a one-time survey to all students currently enrolled in the 6th, 7th, and 8th grades during the 2006-7 academic year.

I understand that after administering the survey and analyzing the data, Lori will provide a written report of the research findings to me and that I will have her permission to use these findings in the day to day administration of my campus.

I, Judy Hundley, do hereby grant permission for Lori Roalson to conduct the survey "Healthy Connections" at Bonham Middle School.

Sincerely,

Judy Hundley, Principal

Appendix D: Cover Letter to Middle School Parents

Hello. I am a graduate student at UT and I am conducting a survey as part of my dissertation. All of the information about the survey is contained on the following pages.

I would like to have your child participate. The survey will take about 30 minutes, and it is totally anonymous. (The only identification on the survey is sex and age. No names will be used.)

I need your permission for your child to participate. Please read and sign the back of the last sheet and return the signed page to your child's 2nd period teacher this week.

As a thank you for returning the signed form, I will be giving your child a voucher for an ice cream from the school's cafeteria.

Thank you so much,

Appendix E: Survey Items

Family Connectedness

Inventory of Parent and Peer Attachment-Revised (IPPA-R; Gullone & Robinson, 2005)

3-point Likert scale “Always True”, “Sometimes True”, “Never True”

1. My parents respect my feelings.
2. My parents are good parents.
3. I wish I had different parents.
4. My parents accept me as I am.
5. I can't depend on my parents to help me solve a problem. (R)
6. I like to get my parents' view on things I'm worried about.
7. It does not help to show my feelings when I am upset. (R)
8. My parents can tell when I'm upset about something.
9. I feel silly or ashamed when I talk about my problems with my parents.
10. My parents expect too much from me.
11. I easily get upset at home.
12. I get upset a lot more than my parents know about.
13. When I talk about things with my parents, they listen to what I think.
14. My parents listen to my opinions.
15. My parents have their own problems, so I don't bother them with mine.
16. My parents help me to understand myself better.
17. I tell my parents about my problems and troubles.
18. I feel angry with my parents.
19. I don't get much attention at home.
20. My parents support me to talk about my worries.
21. My parents understand me.
22. I don't know who I can depend on.
23. When I am angry about something, my parents try to understand.
24. I trust my parents.
25. My parents don't understand my problems.
26. I can count on my parents when I need to talk about a problem.
27. No one understands me.
28. If my parents know that I am upset about something, they ask me about it.

School Connectedness

ADDHEALTH (Resnick et al., 1997)

5-point Likert scale ranging from “Strongly Disagree” to “Strongly Agree”

1. I feel safe in my school.
2. The teachers at this school treat students fairly.
3. I am happy to be at this school.
4. I feel like I am part of this school.
5. I feel close to people at this school.

Religious Connectedness

Spiritual Connectedness

Attachment to God Inventory (AGI; Rowatt & Kirkpatrick, 2002)

5-point Likert scale (0=Strongly Disagree, 4=Strongly Agree)

1. God seems impersonal to me.
2. God seems to have little or no interest in my personal problems.
3. God seems to have little or no interest in my personal affairs.
4. I have a warm relationship with God. (reverse code)
5. God knows when I need support. (reverse code)
6. I feel that God is generally responsive to me. (reverse code)
7. God sometimes seems responsive to my needs, but sometimes not.
8. God's reactions to me seem to be inconsistent.
9. God sometimes seems very warm and other times very cold to me.

Youth Leader Connectedness

4-point Likert Scale (0=Strongly Disagree, 3=Strongly Agree)

1. My youth leader cares about how I'm doing.
2. My youth leader is willing to talk things over with me.
3. I could go to my youth leader if I needed help.
4. My youth leader likes me.
5. I care what my youth leader thinks of me.

Congregation Member Support

4-point Likert Scale (0=Strongly Disagree, 3=Strongly Agree)

1. Members of my church/temple/synagogue care about how I'm doing.
2. Members of my church/temple/synagogue are willing to talk things over with me.
3. I could go to members of my church/temple/synagogue if I needed help.
4. Members of my church/temple/synagogue like me.
5. I care what members of my church/temple/synagogue think of me.

Depressive Symptoms

Center for Epidemiological Studies-Depression Scale for Children (CES-DC; Weissman et al., 1980)

4-point Likert scale "Not At All", "A Little", "Some", "A Lot"

During the past week

1. I was bothered by things that usually don't bother me.
2. I did not feel like eating, I wasn't very hungry.

3. I wasn't able to feel happy, even when my family or friends tried to help me feel better.
4. I felt like I was just as good as other kids.
5. I felt like I couldn't pay attention to what I was doing.
6. I felt down and unhappy.
7. I felt like I was too tired to do things.
8. I felt like something good was going to happen.
9. I felt like things I did before didn't work out right.
10. I felt scared.
11. I didn't sleep as well as I usually sleep.
12. I was happy.
13. I was more quiet than usual.
14. I felt lonely, like I didn't have any friends.
15. I felt like kids I know were not friendly or that they didn't want to be with me.
16. I had a good time.
17. I felt like crying.
18. I felt sad.
19. I felt people didn't like me.
20. It was hard to get started doing things.

Problems Behaviors

Delinquency Sub-Scale from the Multiple Problem Behavior Index (MPBI; Jessor, Van Den Bos, Vanderryn, Costa, & Turbin, 1995)

5-point Likert Scale ranging from "Never" to "5 or More Times"

During the past six months, how often have you:

1. Cheated on tests or homework?
2. Shoplifted from a store?
3. Damaged or marked up public or private property on purpose?
4. Lied to a teacher about something you did?
5. Taken something of value that doesn't belong to you?
6. Stayed out all night without permission?
7. Lied to your parents about where you have been or who you were with?
8. Hit another student because you didn't like what he or she did?
9. Carried a weapon, like a knife or gun, at school?
10. Made fun of or picked on other kids because they are different or not part of your group?

Demographics

1. What is your age?
 - a. 10 years old
 - b. 11 years old
 - c. 12 years old
 - d. 13 years old

- e. 14 years old
- 2. How do you describe yourself?
 - a. White, non-Hispanic
 - b. Hispanic or Latino
 - c. Black or African-American
 - d. Asian-American
 - e. Native American
- 3. What religion or denomination is the place where you go to religious services?
 - a. Catholic
 - b. Mainline Protestant (i.e. Methodist, Presbyterian, Lutheran, Episcopal)
 - c. Fundamental or Evangelical Christian (i.e. Baptist, Church of Christ, Church of God, Assembly of God)
 - d. Other religion besides Christian (i.e. Jewish, Muslim)
 - e. No religious affiliation
- 4. Are you:
 - a. A girl
 - b. A boy
- 5. How often do you go to religious services?
 - a. Once or more each week
 - b. One to three times a month
 - c. Every month or so
 - d. Once or twice a year
 - e. Never
- 6. Besides religious services, how often do you take part in other activities at a place of worship?
 - a. Once or more each week
 - b. One to three times a month
 - c. Every month or so
 - d. Once or twice a year
 - e. Never

Appendix F: “Healthy Connections” Survey Booklet

1. What is your age?
 - a. 10 years old
 - b. 11 years old
 - c. 12 years old
 - d. 13 years old
 - e. 14 years old

2. How do you describe yourself? If you come from more than one group, please choose the one that is closest to you. CHOOSE ONE ANSWER ONLY.
 - a. White, non-Hispanic
 - b. Black or African-American
 - c. Hispanic or Latino
 - d. Asian or Asian-American
 - e. Native American

3. What religion or denomination is the place where you go to religious services?
 - a. Catholic
 - b. Protestant (i.e. Methodist, Presbyterian, Lutheran, Episcopal)
 - c. Fundamental or Evangelical Christian (i.e. Baptist, Church of Christ, Church of God, Assembly of God)
 - d. Other religion besides Christian (i.e. Muslim, Jewish)
 - e. No religious affiliation

4. Are you:
 - a. A girl
 - b. A boy

5. Is one or both of your parents currently serving in the military as an active duty serviceman?
 - a. Neither
 - b. Mom only
 - c. Dad only
 - d. Both mom and dad

Consider your relationship with both of your parents.

Please tell us how true the following statements are for you and your parents.

	Always True	Sometimes True	Never True
6. My parents respect my feelings.	a	b	c
7. My parents are good parents.	a	b	c

	Always True	Sometimes True	Never True
8. I wish I had different parents.	a	b	c
9. My parents accept me as I am.	a	b	c
10. I can't depend on my parents to help me solve a problem.	a	b	c
11. I like to get my parents' view on things I'm worried about.	a	b	c
12. It does not help to show my feelings when I am upset.	a	b	c
13. My parents can tell when I'm upset about something.	a	b	c
14. I feel silly or ashamed when I talk about my problems with my parents.	a	b	c
15. My parents expect too much from me.	a	b	c
16. I easily get upset at home.	a	b	c
17. I get upset a lot more than my parents know about.	a	b	c
18. When I talk about things with my parents, they listen to what I think.	a	b	c
19. My parents listen to my opinions.	a	b	c
20. My parents have their own problems, so I don't bother them with mine.	a	b	c
21. My parents help me to understand myself better.	a	b	c
22. I tell my parents about my problems and troubles.	a	b	c
23. I feel angry with my parents.	a	b	c
24. I don't get much attention at home.	a	b	c
25. My parents support me to talk about my worries.	a	b	c
26. My parents understand me.	a	b	c
27. I don't know who I can depend on.	a	b	c

	Always True	Sometimes True	Never True
28. When I am angry about something, my parents try to understand.	a	b	c
29. I trust my parents.	a	b	c
30. My parents don't understand my problems.	a	b	c
31. I can count on my parents when I need to talk about a problem.	a	b	c
32. No one understands me.	a	b	c
33. If my parents know that I am upset about something, they ask me about it.	a	b	c

The following questions ask how you feel about your school and your teachers.
How strongly do you agree or disagree with the following statements

	Strongly Disagree	Disagree	Neither Agree or Disagree	Agree	Strongly Agree
34. I feel safe in my school.	a	b	c	d	e
35. The teachers at this school treat students fairly.	a	b	c	d	e
36. I am happy to be at this school.	a	b	c	d	e
37. I feel like I am part of this school.	a	b	c	d	e
38. I feel close to people at this school.	a	b	c	d	e

In this section, we want to know about you.

The following statements refer to a wide variety of activities and attitudes that people might use to describe themselves. For each statement, please tell us how true each statement is for you. Mark the first answer that comes to you.

	Almost Always Untrue	Usually Untrue	Sometimes True, Sometimes Untrue	Usually True	Almost Always True
39. It is easy for me to really concentrate on homework problems.	a	b	c	d	e
40. I find it hard to shift gears when I go from one class to another at school.	a	b	c	d	e
41. When trying to study, I have difficulty tuning out background noise and concentrating.	a	b	c	d	e
42. I am good at keeping track of several different things that are happening around me.	a	b	c	d	e
43. I pay close attention when someone tells me how to do something.	a	b	c	d	e
44. I tend to get in the middle of one thing, then go off and do something else.	a	b	c	d	e
45. I have a hard time finishing things on time.	a	b	c	d	e
46. I do something fun for a while before starting my homework, even when I'm not supposed to.	a	b	c	d	e
47. If I have a hard assignment to do, I get started right away.	a	b	c	d	e
48. I finish my homework before the due date.	a	b	c	d	e
49. I put off working on projects until right before they're due.	a	b	c	d	e

Please tell us if the following statements are true or not true for you.

	Not True	True
50. I am always glad to cooperate with others.	a	b
51. I always help people who need help.	a	b
52. I never forget to say “please” and “thank you.”	a	b
53. I have never been tempted to break a rule or a law.	a	b
54. I always do the right things.	a	b
55. Sometimes I don’t obey my parents.	a	b
56. I have never felt like saying unkind things to a person.	a	b
57. Sometimes I try to get even when someone does something to me I don’t like.	a	b
58. When I make a mistake, I always admit I am wrong.	a	b
59. I never let someone else get blamed for what I did wrong.	a	b
60. I never get angry.	a	b
61. I never say anything that would make a person feel bad.	a	b
62. I tell a little lie sometimes.	a	b
63. Sometimes I say something just to impress my friends.	a	b

The following questions ask about your feelings and thoughts during the last month. Please tell us how often you felt or thought a certain way.

	Never	Almost Never	Sometimes	Fairly Often	Very Often
64. How often have you been upset because of something that happened unexpectedly?	a	b	c	d	e
65. How often have you felt that you were unable to control the important things in your life?	a	b	c	d	e

	Never	Almost Never	Sometimes	Fairly Often	Very Often
66. How often have you felt nervous and “stressed”?	a	b	c	d	e
67. How often have you felt confident about your ability to handle your personal problems?	a	b	c	d	e
68. How often have you felt that things were going your way?	a	b	c	d	e
69. How often have you found that you could not cope with all the things that you had to do?	a	b	c	d	e
70. How often have you been able to control irritations in your life?	a	b	c	d	e
71. How often have you felt that you were on top of things?	a	b	c	d	e
72. How often have you been angered because of things that were outside of your control?	a	b	c	d	e
73. How often have you felt difficulties were piling up so high that you could not overcome them?	a	b	c	d	e

Following are events that sometimes happen to people. Please indicate whether each of the following events have happened to you in the past 3 months.

	Did Not Happen	Happened
74. You were unfairly accused of doing something bad because of your race or ethnicity.	a	b
75. People put you down for practicing the customs or traditions of your own race or ethnicity or country of origin.	a	b
76. You were excluded from a group because of your culture or race.	a	b
77. You heard people say bad things or make jokes about your culture or race.	a	b

	Did Not Happen	Happened
78. You were called a racial name that was a put down.	a	b
79. You saw another student treated badly or discriminated against because of his/her race or ethnicity.	a	b

Now we want to know about how you feel and things you do.

Please indicate how much each statement describes how you felt over the past week. During the past week:

	Not at all	A little	Some	A lot
80. I was bothered by things that usually don't bother me.	a	b	c	d
81. I did not feel like eating, I wasn't very hungry.	a	b	c	d
82. I wasn't able to feel happy, even when my family or friends tried to help me feel better.	a	b	c	d
83. I felt like I was just as good as other kids.	a	b	c	d
84. I felt like I couldn't pay attention to what I was doing.	a	b	c	d
85. I felt down and unhappy.	a	b	c	d
86. I felt like I was too tired to do things.	a	b	c	d
87. I felt like something good was going to happen.	a	b	c	d
88. I felt like things I did before didn't work out right.	a	b	c	d
89. I felt scared.	a	b	c	d
90. I didn't sleep as well as I usually sleep.	a	b	c	d
91. I was happy.	a	b	c	d
92. I was more quiet than usual.	a	b	c	d
93. I felt lonely, like I didn't have any friends.	a	b	c	d

	Not at all	A little	Some	A lot
94. I felt like kids I know were not friendly or that they didn't want to be with me.	a	b	c	d
95. I had a good time.	a	b	c	d
96. I felt like crying.	a	b	c	d
97. I felt sad.	a	b	c	d
98. I felt people didn't like me.	a	b	c	d
99. It was hard to get started doing things.	a	b	c	d

Think back over the past six months. How often have you:

	Never	Once	Twice	3-4 Times	5 or more Times
100. Cheated on tests or homework?	a	b	c	d	e
101. Shoplifted from a store?	a	b	c	d	e
102. Damaged or marked up public or private property on purpose?	a	b	c	d	e
103. Lied to a teacher about something you did?	a	b	c	d	e
104. Taken something of value that doesn't belong to you?	a	b	c	d	e
105. Stayed out all night without permission?	a	b	c	d	e
106. Lied to your parents about where you have been or who you were with?	a	b	c	d	e
107. Hit another student because you didn't like what he or she did?	a	b	c	d	e
108. Carried a weapon, like a knife or gun, at school?	a	b	c	d	e

	Never	Once	Twice	3-4 Times	5 or more Times
109. Made fun of or picked on other kids because they are different or not part of your group?	a	b	c	d	e

Now we want to know about your religion and spirituality.

	Once or more each week	One to three times a month	Every month or so	Once or twice a year	Never
110. How often do you go to religious services?	a	b	c	d	e
111. Besides religious services, how often do you take part in other activities at a place of worship?	a	b	c	d	e

**Please tell us about your relationship with the people from your place of worship.
How strongly do you agree or disagree with the following statements:**

	Strongly Disagree	Disagree	Agree	Strongly Agree
112. My youth leader cares about how I'm doing.	a	b	c	d
113. My youth leader is willing to talk things over with me.	a	b	c	d
114. I could go to my youth leader if I needed help.	a	b	c	d
115. My youth leader likes me.	a	b	c	d
116. I care what my youth leader thinks of me.	a	b	c	d

How strongly do you agree or disagree with the following statements:

	Strongly Disagree	Disagree	Agree	Strongly Agree
117. Members of my place of worship care about how I'm doing.	a	b	c	d
118. Members of my place of worship are willing to talk things over with me.	a	b	c	d
	Strongly Disagree	Disagree	Agree	Strongly Agree
119. I could go to members of my place of worship if I needed help.	a	b	c	d
120. Members of my place of worship like me.	a	b	c	d
121. I care what members of my place of worship think of me.	a	b	c	d

Now we want to know a bit more about you and how you feel about your relationship with God. In the following questions, the word "God" refers to the god of your beliefs. How much do you agree or disagree with the following statements?

	Strongly Disagree	Disagree	Agree	Strongly Agree
122. God seems impersonal to me.	a	b	c	d
123. God seems to have little or no interest in my personal problems.	a	b	c	d
124. God seems to have little or no interest in my personal affairs.	a	b	c	d
125. I have a warm relationship with God.	a	b	c	d
126. God knows when I need support.	a	b	c	d
127. I feel that God is generally responsive to me.	a	b	c	d
128. God sometimes seems responsive to my needs, but sometimes not.	a	b	c	d

	Strongly Disagree	Disagree	Agree	Strongly Agree
129. God's reactions to me seem to be inconsistent.	a	b	c	d
130. God sometimes seems very warm and other times very cold to me.	a	b	c	d

Thank you for taking this survey!

References

- Aiken, L. S. & West, S. G. (1991). *Multiple Regression: Testing and Interpreting Interactions*. Thousand Oaks, CA: SAGE Publications, Inc.
- Ainsworth, M. D. S. (1989). Attachments beyond infancy. *American Psychologist*, 44, 709-716.
- Allen, J. P., Hauser, S. T., Bell, K. L., & O'Connor, T. G. (1994). Longitudinal assessment of autonomy and relatedness in adolescent family interactions as predictors of adolescent ego development and self-esteem. *Child Development*, 65, 179-194.
- Allen, J. P., Moore, C., Kuperminc, G., & Bell, K. (1998). Attachment and adolescent psychosocial functioning. *Child Development*, 69, 1406-1419.
- Armsden G. C. & Greenberg, M. T. (1987). The inventory of parent and peer attachment: Individual differences and their relationships to psychological well-being in adolescence. *Journal of Youth and Adolescence*, 16, 427-454.
- Baier, C. J. & Wright, B. R. E. (2001). "If you love me, keep my commandments": A meta-analysis of the effect of religion on crime. *Journal of Research in Crime and Delinquency*, 38, 3-21.
- Barber, B. K. (1997). Introduction: Adolescent socialization in context: Connection, regulation, and autonomy in multiple contexts. *Journal of Adolescent Research*, 12, 173-177.

- Barber, B. K. & Olsen, J. A. (1997). Socialization in context: Connection, regulation, and autonomy in the family, school, and neighborhood, and with peers. *Journal of Adolescent Research, 12*, 287-315.
- Baumrind, D. (1991). The influence of parenting style on adolescent competence and substance use. *Journal of Early Adolescence, 11*, 56-95.
- Birmaher, B., Ryan, N. D., Williamson, D. E., Brent, D. A., Kaufman, J., Dahl, R. E., Perel, J., & Nelson, B. (1996). Childhood and adolescent depression: a review of the past 10 years. *Journal of the American Academy of Child and Adolescent Psychiatry, 35*, 1427-1440.
- Brooks, T. L., Harris, S. K., Thrall, J. S., & Woods, E. R. Association of adolescent risk behaviors with mental health symptoms in high school students. *Journal of Adolescent Health, 31*, 240-246.
- Cassidy, J. & Berlin, L. J. (1994). The insecure/ambivalent pattern of attachment: Theory and research. *Child Development, 65*, 971-991.
- Cicchetti, D., & Toth, S. L. (1998). The development of depression in children and adolescents. *American Psychologist, 53*, 221-241.
- Cochran, J. K., Beeghley, L., & Bock, W. (1988). Religiosity and alcohol behavior: An exploration of reference group theory. *Sociological forum, 3*, 256-276.
- Collins, N. L., Cooper, M. L., Albino, A., & Allard, L. (2002). Psychosocial vulnerability from adolescence to Adulthood: A prospective study of attachment style differences in relationship functioning and partner choice. *Journal of Personality, 70*, 965-1008.

- Corwyn, R. F. & Benda, B. B. (2000). Religiosity and church attendance: The effects on use of “hard drugs” controlling for sociodemographic and theoretical factors. *International Journal for the Psychology of Religion, 10*, 241-258.
- Costa, F. M., Jessor, R., Turbin, M. S., Dong, Q., Zhange, H., & Wang, C. (2005). The role of social contexts in adolescence: Context protection and context risk in the United States and China. *Applied Developmental Science, 9*, 67-85.
- Crosnoe, R., Erickson, K. G., & Dornbusch, S. M. (2002). Protective functions of family relationships and school factors on the deviant behavior of adolescent boys and girls: Reducing the impact of risky friendships. *Youth & Society, 33*, 515-544.
- Cummings, E. M., Iannotti, R. J., & Zahn-Waxler, C. (1989). Aggression between peers in early childhood: Individual continuity and developmental change. *Child Development, 60*, 887-895.
- Donahue, M. J. & Benson, P. L. (1995). Religion and the well-being of adolescents. *Journal of Social Issues, 51*:145-160.
- Dornbusch, S. M., Erickson, K. G., Laird, J., & Wong, C. A. (2001). The relation of family and school attachment to adolescent deviance in diverse groups and communities. *Journal of Adolescent Research, 16*, 396-422.
- Eccles, J. S., Early, D., Frasier, K., Belansky, E., & McCarthy, K. (1997). The relation of connection, regulation, and support for autonomy to adolescents’ functioning. *Journal of Adolescent Research, 12*, 263-286.
- Eccles, J. S., Midgley, C., Wigfield, A., Buchanan, C. M., Reuman, D., Flanagan, C., & Mac Iver, D. (1993). Development during adolescence: The impact of stage-

- environment fit on young adolescents' experiences in schools and in families. *American Psychologist*, 48, 90-101.
- Ellison, C. G. & Levin, J. S. (1998). The religion-health connection: Evidence, theory, and future directions. *Health Education and Behavior*, 25, 700-720.
- Escobedo, L. G., Reddy, M., & Giovino, G. A. (1998). The relationship between depressive symptoms and cigarette smoking in U.S. adolescents. *Addiction*, 93, 433-440.
- Essau, C. A. (2004). The association between family factors and depressive disorders in adolescents. *Journal of Youth and Adolescence*, 33, 365-372.
- Faulstich, M. E., Carey, M. P., Ruggiero, L., Enyart, P., & Gresham, F. (1986). Assessment of depression in childhood and adolescence: an evaluation of the Center for Epidemiological Studies depression scale for children (CES-DC). *American Journal of Psychiatry*, 143, 1024-1027.
- Fetzer Institute (1999). *Multidimensional Measurement of Religiousness/Spirituality for use in Health Research*. Kalamazoo, MI: Fetzer Institute.
- Galambos, N. L., Barker, E. T., & Almeida, D. M. (2003). Parents do matter: Trajectories of change in externalizing and internalizing problems in early adolescence. *Child Development*, 74, 578-594.
- Galambos, N. L., & Ehrenberg, M. F. (1997). The family as health risk and opportunity: A focus on divorce and working families. In J. Schulenberg, J. L. Maggs, & K. Hurrelmann (Eds.), *Health Risks and Developmental Transitions During Adolescence* (pp. 139-160). Cambridge, England: Cambridge University Press.

- Galambos, N. L., Leadbeater, B. J., & Barker, E. T. (2004). Gender differences in and risk factors for depression in adolescence: a 4-year longitudinal study. *International Journal of Behavioral Development, 28*, 16-25.
- Garber, J., Robinson, N. S., & Valentiner, D. (1997). The relation between parenting and adolescent depression: Self-worth as a mediator. *Journal of Adolescent Research, 12*, 12-33.
- Gray, M. & Steinberg, L. (1999). Unpacking authoritative parenting: Reassessing a multidimensional construct. *Journal of Marriage and the Family, 61*, 574-587.
- Gullone, E. & Robinson, K. (2005). The inventory of parent and peer attachment-revised (IPPA-R) for children: a psychometric investigation. *Clinical Psychology and Psychotherapy, 12*, 67-79.
- Herman, M. R., Dornbusch, S. M., Herron, M. C., & Herting, J. R. (1997). The influence of family regulation, connection, and psychological autonomy on six measures of adolescent functioning. *Journal of Adolescent Research, 12*, 34-67.
- Hirschi, T. (1969). *Causes of delinquency*. Berkeley: University of California Press.
- Huebner, A. J. & Betts, S. C. (2002). Exploring the utility of social control theory for youth development: Issues of attachment, involvement, and gender. *Youth & Society, 34*, 123-145.
- Huesmann, L. R., Eron, L. D., Lefkowitz, M. M., & Walder, L. O. (1984). Stability of aggression over time and generations. *Developmental Psychology, 20*, 1120-1134.

- Jessor, R., Donovan, J. E., & Costa, F. M. (1991). *Beyond adolescence: Problem behavior and young adult development*. Cambridge, England: Cambridge University Press.
- Jessor, R., & Jessor, S. L. (1977). *Problem behavior and psychosocial development: A longitudinal study of youth*. New York: Academic Press.
- Jessor, R., Turbin, M. S., Costa, F. M., Dong, Q., Zhang, H., & Wang, C. (2003). Adolescent problem behavior in China and the United States: a cross-national study of psychosocial protective factors. *Journal of Research on Adolescence*, 13, 329-360.
- Jessor, R., Van Den Bos, J., Vanderryn, J., Costa, F. M., & Turbin, M. S. (1995). Protective factors in adolescent problem behavior: Moderator effects and developmental change. *Developmental Psychology*, 31, 923-933.
- Johnson, B. R., Joon Jang, S., Larson, D. B., & De Li, S. (2001). Does adolescent religious commitment matter? A reexamination of the effects of religiosity on delinquency. *Journal of Research in Crime and Delinquency*, 38:22-44.
- Krause, N., Ellison, C. G., Shaw, B. A., Marcum, J. P., & Boardman, J. D. (2001). Church-based social support and religious coping. *Journal for the Scientific Study of Religion*, 40, 637-656.
- Laible, D. J., Carlo, G., & Raffaelli, M. (2000). The differential relations of parent and peer attachment to adolescent adjustment. *Journal of Youth and Adolescence*, 29, 45-59.

- Leadbeater, B. J., Kuperminc, G. P., Blatt, S. J., & Hertzog, C. (1999). A multivariate model of gender differences in adolescents' internalizing and externalizing problems. *Developmental Psychology*, 35, 1268-1282.
- Lerner, R. M. & Galambos, N. L. (1998). Adolescent development: Challenges and opportunities for research, programs, and policies. *Annual Review of Psychology*, 49, 413-446.
- Loeber, R. & Hay, D. (1997). Key issues in the development of aggression and violence from childhood to early adulthood. *Annual Review of Psychology*, 48, 371-410.
- Loeber, R., Keenan, K. & Zhang, Q. (1997). Boys' experimentation and persistence in developmental pathways toward serious delinquency. *Journal of Child and Family Studies*, 6, 321-357.
- Loeber, R., & Stouthamer-Loeber, M. (1998). Development of juvenile aggression and violence: Some common misconceptions and controversies. *American Psychologist*, 53, 242-259.
- Maccoby, E. E. (1992). The role of parents in the socialization of children: An historical overview. *Developmental Psychology*, 28, 1006-1017.
- Marcus, R. F. & Betzer, P. D. S. (1996). Attachment and antisocial behavior in early adolescence. *Journal of Early Adolescence*, 16, 229-248.
- McBride, C. M., Curry, S. J., Cheadle, A., Anderman, C., Wagner, E. H., Diehr, W., & Psaty, B. (1995). School-level application of a social bonding model to adolescent risk-taking behavior. *Journal of School Health*, 65, 63-68.

- Mosher, J. P. & Handal, P. J. (1997). The relationship between religion and psychological distress in adolescents. *Journal of Psychology and Theology*, 25, 449-457.
- O'Donnell, D. A., Schwab-Stone, M. E., & Mueeed, A. Z. (2002). Multidimensional resilience in urban children exposed to community violence. *Child Development*, 73, 1265-1282.
- Olson, D. H., Tiesel, J. W., & Gorall, D. M. (1996). *Family Adaptability and Cohesion Evaluation Scale IV*. St. Paul, MN: Family Social Science, University of Minnesota.
- Pearce, M. J., Jones, S. M., Schwab-Stone, M. E., & Ruchkin, V. (2003). The protective effects of religiousness and parent involvement on the development of conduct problems among youth exposed to violence. *Child Development*, 74:1682-1696.
- Pearce, M. J., Little, T. D., & Perez, J. E. (2003). Religiousness and depressive symptoms among adolescents. *Journal of Clinical Child and Adolescent Psychology*, 32:267-276.
- Pine, D. S., Cohen, E., Cohen, P., & Brook, J. (1999). Adolescent depressive symptoms as predictors of adult depression: moodiness or mood disorder? *American Journal of Psychiatry*, 156, 133-135.
- Prelow, H. M., Bowman, M. A., & Weaver, S. R. (2007). Predictors of psychosocial well-being in urban African American and European American youth: The role of ecological factors. *Journal of Youth and Adolescence*, 36, 543-553.
- Resnick, M. D., Bearman, P. S., Blum, R. W., Bauman, K. E., Harris, K. M., Jones, J., Tabor, T., Beuhring, R., Sieving, M., Shew, M., Ireland, L., Beringer, L., & Udry,

- J. R. (1997). Protecting adolescents from harm: Findings from the National Longitudinal Study of Adolescent Health. *Journal of the American Medical Association*, 278, 823-832.
- Roalson, L. A. & Loukas, A. (2004, March). *Effect of school connectedness on early adolescent conduct problems*. Poster presentation at the biennial meeting of the Society of Research on Adolescence in Baltimore, MD.
- Roeser, R. W., Eccles, J. S., & Sameroff, A. J. (1998). Academic and emotional functioning in early adolescence: Longitudinal relations, patterns, and prediction by experience in middle school. *Development and Psychopathology*, 10, 321-352.
- Roeser, R. W., Eccles, J. S., & Sameroff, A. J. (2000). School as a context of early adolescents' academic and social-emotional development: A summary of research findings. *The Elementary School Journal*, 100, 443-471.
- Rowatt, W. C. and Kirkpatrick, L. A. (2002). Two dimensions of attachment to god and their relation to affect, religiosity, and personality constructs. *Journal for the Scientific Study of Religion*, 41, 637-651.
- Saluja, G., Iacham, R., Scheidt, P. C., Overpeck, M. D., Sun, W., & Giedd, J. N. (2004). Prevalence of and risk factor for depressive symptoms among young adolescents. *Archives of Pediatric and Adolescent Medicine*, 158, 760-765.
- Sameroff, A. J., Peck, S. C., & Eccles, J. S. (2004). Changing ecological determinants of conduct problems from adolescence to early adulthood. *Development and Psychopathology*, 16, 873-896.

- Schapman, A. M. & Inderbitzen-Nolan, H. M. (2002). The role of religious behaviour in adolescent depressive and anxious symptomatology. *Journal of Adolescence*, 25:631-643.
- Schluderman, E., & Schluderman, S. (1970). Replicability of factors in children's report of parent behavior (CRPBI). *Journal of Psychology*, 76, 239-249.
- Simons, L. G., Simons, R. L., & Conger, R. D. (2004). Identifying the mechanisms whereby family religiosity influences the probability of adolescent antisocial behavior. *Journal of Comparative Family Studies*, 35:547-563.
- Smith, C. (2003a). Theorizing religious effects among American adolescents. *Journal for the Scientific Study of Religion*, 42, 17-30.
- Smith, C. (2003b). Religious participation and network closure among American adolescents. *Journal of the Scientific Study of Religion*, 42, 259-267.
- Smith, C., Denton, M. L., Faris, R., & Regnerus, M. (2002). Mapping American adolescent religious participation. *Journal for the Scientific Study of Religion*, 41, 597-612.
- Smith, C., Faris, R., Denton, M. L., & Regnerus, M. (2003). Mapping American adolescent subjective religiosity and attitudes of alienation toward religion: A research report. *Sociology of Religion*, 64, 111-133.
- Smith, C. & Sikkink, D. (2003). Social predictors of retention in and switching from the religious faith of family origin: Another look using religious tradition self-identification. *Review of Religion Research*, 45, 188-206.

- Stark, R. (1996). Religion as context: Hellfire and delinquency one more time. *Sociology of Religion, 57*, 163-173.
- Steinberg, L. (2001). We know some things: Parent-adolescent relationships in retrospect and prospect. *Journal of Research on Adolescence, 11*, 1-19.
- Steinberg, L. & Morris, A. S. (2001). Adolescent development. *Annual Review of Psychology, 52*, 83-110.
- Sund, A. M. & Wichstrom, L. (2002). Insecure attachment as a risk factor for future depressive symptoms in early adolescence. *Journal of the American Academy of Child and Adolescent Psychiatry, 41*, 1478-1485.
- Underwood, L. G. (2006). Ordinary spiritual experience: Qualitative research, interpretive guidelines, and population distribution for the daily spiritual experiences scale. *Archive for the Psychology of Religion, 28*, 181-218.
- Underwood, L. G. & Teresi, J. A. (2002). The daily spiritual experience scale: development, theoretical description, reliability, exploratory factor analysis, and preliminary construct validity using health-related data. *Annals of Behavioral Medicine, 24*, 22-33.
- U. S. Census Bureau (2000). *U. S. Census Bureau: State and County QuickFacts*. Retrieved June 18, 2007, from <http://quickfacts.census.gov/qfd/states/48/4872176.html>.
- Wallace, J. M., & Forman, T. A. (2006). Religion's role in promoting health and reducing risk among American youth. *Health Education & Behavior, 25*, 721-741.

- Way, N. & Robinson, M. G. (2003). A longitudinal study of the effects of family, friends, and school experiences on the psychological adjustment of ethnic minority, low-SES adolescents. *Journal of Adolescent Research, 18*, 324-346.
- Weisman, M. M., Wolk, S., Goldstein, R. B., Moreau, D., Adams, P., Greenwald, S., et al. (1999). Depressed adolescents grown up. *Journal of the American Medical Association, 281*, 1707-1713.
- Wiesner, M. & Windle, M. (2004). Assessing covariates of adolescent delinquency trajectories: a latent growth mixture modeling approach. *Journal of Youth and Adolescence, 33*, 431-442.
- Wilcox, H., Field, T., Prodromidis, M. & Scafidi, F. (1998). Correlations between the BDI and CES-D in a sample of adolescent mothers. *Adolescence, 33*, 565-574.
- Wright, L. S., Frost, C. J. & Wisecarver, S. J. (1993). Church attendance, meaningfulness of religion, and depressive symptomatology among adolescents. *Journal of Youth and Adolescence, 22*, 559-568.
- Youniss, J., McLellan, J. A., & Yates, M. (1999). Religion, community service, and identity in American youth. *Journal of Adolescence, 22*, 243-253.

VITA

Lori Anne Roalson was born in Houston, Texas on May 17, 1969, the daughter of Allen Dean Roalson and Kathy Markquart Roalson. After completing her work at Westbury High School, Houston, Texas, in 1987, Lori entered The University of Houston in Houston, Texas. She received her degree of Bachelor of Science in Psychology with a minor in Sociology in May 1992. During the following years Lori was employed as a Commercial Accounts Underwriter and soon after promoted to Commercial Lines Service Supervisor at State Farm Insurance Companies Regional Office in Austin, Texas. In 1997, she entered the Graduate School of The University of Texas at Austin and in 1999 completed her degree of Master of Education in Health Education. Lori was employed as a Health Educator and Manager at Body Image Inc. from 1999 until 2001, when she returned to the university environment as an Adjunct Professor and taught a variety of health education courses at The University of Texas at San Antonio. As she continued teaching at in San Antonio, Lori returned to The University of Texas at Austin in June 2002 and joined the Department of Kinesiology and Health Education to pursue her doctoral degree in Health Education. During this time, Lori worked as an assistant instructor at The University of Texas at Austin, presented research findings at several professional conferences, and coauthored a journal article published in the *Journal of Early Adolescence* in 2006.

Permanent Address: 4704 Hawkhaven Lane, Austin, Texas 78727

This dissertation was typed by the author.